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Canadian Journal of PUBLIC HEALTH

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TORONTO, JULY 1952

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Presidential Address

M. R. ELLIOTT, O.B.E., M.D., D.P.H.

*Deputy Minister of Health for the
Province of Manitoba, and
President, Canadian Public Health Association*

OUR meeting today marks a definite milestone in the progress of the Canadian Public Health Association. In following the traditional practice of presenting the presidential address, I am humbly conscious of the high standard set by my predecessors of the last forty years. May I first take this opportunity of thanking the members of the Association for the honour conferred upon me in my appointment as presiding officer. I can assure you I deeply appreciate this gesture of confidence.

Public health has grown up in the years since our early beginnings in 1910. Although we stem from several professions, we as a group are now recognized as a professional entity, the profession of Public Health. With this new dignity has come increased responsibility in the total picture of health care—a responsibility which is constantly becoming more important, and of widening influence in the evolutionary changes of modern society. Periodic self-examination, and appraisal of our relationship with other agencies of national influence, is essential if we are to maintain our place of leadership in the health field. I propose therefore to consider briefly the one relationship which, to me, is of paramount importance at the present time, namely that with organized medicine.

I have no new or original concept to offer. This is a subject which has been propounded by our leaders for many years. It has been the constant theme of men like Grant Fleming and our good friend Fred Jackson, to whom I must pay personal tribute for much inspiration. It was given emphasis in the presidential address to the American Public Health Association last year. Nevertheless I feel that present conditions justify still further reflections on this important topic, which is also timely and appropriate since we are honoured in having the president of the Canadian Medical Association at our meeting.

Presented at the fortieth annual meeting of the Canadian Public Health Association, held in the Fort Garry Hotel, Winnipeg, June 16-18, 1952.

Some years ago it was stated that our ideal should be "the maximum of good health for every citizen of Canada." I have not since heard this refuted, but good health for all the people cannot be provided by public health workers alone, nor by the private physician or by medical centres, but only by an efficient working relationship among all three. Preventive and curative medicine cannot be separated on any sound principle. The dividing point, if we must have one, between private practice of medicine and public health has been defined by Dr. Sheppard as "That point at which the health problem in a given community is of sufficient interest to a sufficient number of citizens, so that some type of community organization is required to solve it."

The concept of preventive health work is broadening. It no longer means solely safeguarding the physical environment, curbing the spread of infection or preventing the onset of disease. It now also means preventing the continuance or progress of disease that has already occurred. To quote the words of the official A.P.H.A. statement, it means "preventing the development or persistence of disability or invalidism, and of dependency, destitution and other undesirable social effects. This type of service requires not only close co-ordination of the medical care program with that of public health agencies, but also emphasis on individual health promotion and preventive care by practitioners." Preventive medicine should constitute a large part of general practice.

The development of local health units in Canada and the United States constitutes perhaps our most progressive step in recent years. We can now visualize, in the not too distant future, the time when all our citizens will be served by them. But the increasing responsibility of public health in general has also been definitely reflected to the local level. It is only seven years ago, in 1945, that Dr. Haven Emerson so eloquently put forward the six major activities of health units that were then considered as "basic". The rapid development of health services has already caused these definitions, based on limited categories of activity, to become outdated. It is now accepted that local health department services be expressed in general terms, based on "optimum" responsibilities, and envisaging general areas of service, rather than specific limited functions. This is a recognition of the newer concept and raises our sights above the routine and static. One of these areas of service implies that it is the duty of local health units to co-ordinate all the health care activities and resources of the community.

This may be still an ideal of the future in some cases. We know from experience that strong health departments exist where local physicians provide interest and support, and that conversely, where local physicians are disinterested, this may be reflected in a weak health department. The local health unit cannot operate successfully or remain progressive and alert to community needs, without the willing and co-operative services of the general practitioners and specialists of the area. Both bodies must have a primary interest in the total health of the public.

As a former general practitioner in the country, I know something of the opportunities for doing preventive work in these circumstances. It was here I first became interested in public health and resolved to make it my specialty. In the seventeen years that have elapsed since this became my full-time activity, I have always considered myself as still practising the profession of medicine. One

hesitates to relate that at times there has been some difficulty in maintaining this attitude, but I know that I speak for others in this audience in acknowledging our awareness of the tendency to regard public health physicians as a group a little apart from organized medicine.

It is true that outwardly there is without doubt a good relationship between public health and medical associations. The Royal College of Physicians and Surgeons has now recognized the specialty of public health and given us equal status with our colleagues in other specialties.

The official statement of the C.M.A. in regard to health insurance puts emphasis on the importance of prevention in any nation-wide scheme. Sections of Preventive Medicine are organized at the national level and in many provincial branches of the Association. Many of the officers of the C.M.A. have been alert to national and local health needs and to the objectives of the public health movement. In past meetings of our Association we have had joint discussions of mutual problems which have been of great benefit. In Manitoba, representatives of organized medicine sit on our Board of Health and Advisory Commission—medical practitioners are on the advisory boards of every local health unit—a representative of the Health Officers Association is a member of the Executive of the Manitoba Medical Association. The Association also gave splendid co-operation in the preparation of the Health Survey report.

It must be agreed that these are desirable evidences of good will, yet there are disconcerting signs that all is not well. The Section of Preventive Medicine was not even listed on the program of the C.M.A. this year. The committee on public health of that Association has reported that for two years in succession not one matter was referred for consideration, and the committee has recommended that it might be dissolved. Is there not something ominous in this? While a public health committee of our own Manitoba Medical Association has existed on paper, reports of recent years indicate a complete absence of any activity, except for a special meeting to consider fluoridation of water this year.

Some medical schools in Canada are still without any full-time professor of public health or social and preventive medicine. The number of graduates applying for training at our schools of hygiene is diminishing rather than increasing, and is away below requirements. So far this year, there have been only two graduates out of a class of 83 in Manitoba, who have entered public health work. Although diminishing in number, we still have opinions expressed by private physicians that the organized public health services of a local health unit are detrimental to private practice, when as a matter of fact the reverse is true. What is wrong when we have municipalities in Manitoba with practising physicians who have refused to accept the part-time responsibility of an M.O.H.? There are apparently still some physicians who tend to confuse public health programs with what they call socialized medicine.

These are serious tendencies, and indicate misunderstandings which must be corrected. The improvement in the teaching of public health and preventive medicine in our medical schools in recent years will, it is hoped, help in this direction. Nor does the fault lie solely with the practising medical profession, but is due in a large measure to our failure to properly seek their co-operation. Too often the health officer, singly or collectively, through lack of experience or knowledge,

has failed to explain his objectives and the needs of the public to his medical colleagues. Sometimes we may even fail to appreciate the extent to which the success of our program depends on the physician's co-operation. We cannot afford to stand aloof and allow the matter to solve itself. This is not the time for our relationships to be slipping when they should be cementing. Our purposes must be unified. I am convinced that these indifferences and misunderstandings can be ironed out, and that the physician can be our emissary of good health. Actually most physicians do take a keen interest in the work of the health officer—he is one of them—a physician trained for a special job, and together they make up a team which provides maximum good for the community.

How, then, can we fill the gaps? How can we carry this mutual co-operation from the individual to the organized bodies, and thus achieve our purpose? May I suggest a few areas in which this closer co-operation of public health and organized medicine is not only possible, but eminently desirable.

Medical Education

Undergraduate medical education must be continuously appraised in terms of the changing requirements of the times. As his clinical training progresses, the medical student should have an opportunity to study, not only disease processes, but also the effect on the patient and his family in the home environment. No student should be graduated without study of the psychological, social, economic and other aspects of "total" patient care. Desirable as it is to have full-time professorships, there are still some schools without them, but this need not preclude the teaching of the preventive aspects in all phases, both clinical and theoretical. It can and should be done by practising clinicians. Health departments should furnish medical students with an opportunity to see something of the practice of medicine and public health outside our larger centres of learning. Preceptorships in general practice and public health, and schedules of field trips should be encouraged. This same teaching can be used to impress the student with the necessity and practicality of team work between the physician and other members of the health team.

Maternal and Child Care

In the field of maternal and child care programs there should be the closest co-operation between organized medicine and health departments. We know that many projects now being carried out by health personnel could more advantageously be conducted by the family physician. In our health unit work it is not always possible to get this help, and probably again the fault is ours in not properly acquainting the profession with our program, and asking for assistance in its planning and operation. A very recent report of the state public health maternity program in Maryland, which has produced a reduction of approximately 50% in infant and maternal death rates amongst low-income groups, states that without the co-operation and loyal services of local practising physicians, these results would not have been possible. Their assistance was of vital importance. In this field, the health department should be the co-ordinating agency in the community, rendering advice and education, not to coerce, but to lead.

Mental Hygiene

Public health is bound to move far more actively than it has up to the present time in the field of mental hygiene. We are fully aware of the vast difficulties which must be overcome in developing an effective mental hygiene program, but there is now sufficient knowledge to enable us to make progress in the promotion of mental health and the prevention of mental disease. The presence of frank mental illness, together with the multitude of minor mental disorders in our communities, represents one of our most persistent and expensive problems. Mental health is something that intensely affects health departments in all its relationships, but here the private practitioner has an unexcelled opportunity to instruct, to guide and plan a course of life which will promote mental health along with physical health. The health department can improve the mental health of its community by closer co-operation with the specialists in organized medicine who are competent to deal with cases.

Chronic Disease

The physician is the key to success in any broad program of prevention in the care of chronic disease. Perhaps because there are relatively few primary preventive measures against chronic impairments, the role of the health department in this field has not yet been clearly established. There are, however, many ways in which the actual or potential resources of the health agency may be utilized, such as providing auxiliary services for physicians in private practice, or operating the facilities which may be established under public auspices. There are at least 50 diseases which may be classed as chronic, which are now susceptible to varying degrees of control, but we shall not have large-scale prevention until every private physician's office, every clinic, hospital or health agency is a listening post for these diseases. The detection, diagnosis and treatment of chronic disease requires the co-operative endeavours of a number of different physicians with widely different skills, and they should participate with health departments in all phases of planning, whether it be mass screening or other methods of detection. An excellent example of this co-operation in actual practice is the splendid work of our Crippled Children's Societies, aided so efficiently by practitioners. Without this type of mutual assistance neither could make the maximum contribution.

Civil Defence

Health planning today must consider a number of new health hazards which accompany modern warfare. Brig. General Simmons of the U.S. Army and Dean of the Harvard School of Public Health says, "If our people are to be prepared to meet these hazards successfully, public health and organized medicine must provide the central leadership required to give the best possible medical and surgical care, and at the same time develop adequate preventive programs. To accomplish this goal will require unselfish teamwork on the part of every member of the professions of medicine and public health." We in health departments, being charged with the administrative responsibility for civil defence health programs, are very grateful for the co-operation already shown by the practising doctors, but would plead for this to be continued in increased measure.

Community Health Planning

Perhaps never before have people been so health conscious as today. Local community organizations are crying out for help and guidance in planning better health care for their citizens; health officers or public health officials are continuously being asked for advice. Whether we like it or not, there is a sizable element of the public which is critical of medicine as it is practised in some places today. Why should not organized medicine have an equal interest and take just as active a part in meeting these requests? As the problems of communicable disease and environmental sanitation become less acute, we find increasing concern amongst the public with other problems, such as the care of the ageing population, inadequate housing, the increasing high proportion of deaths from heart disease and accidents, cancer, diabetes, etc. The community is bound to make some effort to combat these common and serious problems, and the health department and its trained staff must take an active part in their efforts. These efforts will be much more effective if the health officer has the understanding and active support of the practising physicians in his community.

These are but a few of the avenues open to us. What, then, can we as health officials do to help this situation and take some positive action? It is not enough to render lip service to the idea of the practice of preventive medicine by the general practitioner, and then to disregard him in planning public health services. Despite all the activity that is going on today and despite all the progress that has been made, there is still need for a community organization to spearhead the work. The people expect the health department to be that organization. But it is obvious that we must take organized medicine into our complete confidence, keeping them fully informed concerning policies, programs and facilities. There must be mutual trust and understanding between the two. Health departments must be increasingly concerned with the character and availability of medical services and facilities within their areas. We must be alert to the rapid changes which modern therapeutic measures are making in the public health picture. The effects of antibiotics on scarlet fever, venereal disease, and pneumonia, to mention only three, have completely revolutionized control measures and we must be alive to these advances and not lag behind in our programs. There are bound to be further radical changes, and the health department in future will have many new responsibilities, as it will gradually discard some of its old ones. It can begin preparing for its new ones by surveying the resources already available in the community and be ready to adapt or apply them to health purposes. It must train a wide variety of new workers and be prepared to make liberal use of consultants. Many of the specialists of medical practice have a place in modern health programs and not all of them can or should be on the staff of health departments.

The private practitioners of medicine are essential to public health and social betterment. Our Association, dedicated to the health needs of Canada, welcomes and anticipates the whole-hearted collaboration of the medical profession. An editorial in the New England Journal of Medicine contains the following sentence, with which I will close: "When the private practitioner and the public health officer can see their duties as mutually independent parts of a general plan to benefit the health and happiness of all mankind, then another step will have been taken in the direction of an attainable millennium."

Some Observations on Sickness Insurance in Europe

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IN SEPTEMBER and October of last year, I had the privilege of visiting Europe to study sickness insurance plans in Norway, Sweden, Denmark, the Netherlands, and Great Britain. As a one-time general practitioner, I was particularly interested in the kind of medical services being provided, how the plans were working out, and what the opinion of organized medicine was about sickness insurance in general.

All countries with sickness insurance visited have certain common features. One of the most important of these is that practically all the hospitals are owned and operated by the State and/or the local community. These hospitals have a full-time salaried medical staff and provide all medical services required in hospital and out-patient clinics. The charge for hospital services made to sick funds is usually only nominal, never exceeding two-thirds of the actual cost. The State and/or the community provide for any deficit from general *tax* funds.

In most countries every person has a family doctor. The doctor chosen assumes the responsibility for referring patients to hospitals and specialists as necessity arises. Patients as a rule can not and do not go direct to specialists or hospitals.

Except in Great Britain, the private practitioners have access to the diagnostic facilities available at the hospitals and seem to make reasonable use of them.

In nearly all countries that have compulsory insurance for wage-earners, there is a specified income level. This usually is high enough to include at least 90% of all workers.

In the countries visited, pension plans for doctors are in operation or in the process of being organized.

It was gratifying to note that practically all the medical associations seem to work in the closest harmony with the State in the provision of services.

In Norway, the first country visited, I found a sickness insurance program that covered over 80% of the total population. This plan is part compulsory and part voluntary. The compulsory portion is for wage earners and their dependents, and for certain other groups such as fishermen.

There are two kinds of general practitioners in Norway, state doctors and private practitioners. The state doctors are part-time health officers, receiving remuneration from the State or local government. The balance of their income

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is derived from private practice. In Norway the physicians are paid on a fee-for-services-rendered basis under a special schedule of fees agreed to by the Norwegian Medical Association, the Minister of Social Affairs, and the Director of Price Control—who is in the Department of Finance. The patient pays direct to the doctor approximately one-third of the cost of the services rendered. The general practitioner bills the insurance fund of which the patient is a member each month for the balance of the account.

As the general practitioner service is on a fee-for-services-rendered basis, I was anxious to find out from officers of the sick funds if they had any difficulties with the control of doctors' accounts. In Oslo, one sick fund covers the whole of the city and has a well-organized administration. Here I visited the section responsible for the supervision and control of doctors' accounts. When I asked the medical officer in charge about abuses, he said that a satisfactory settlement could nearly always be made by direct approach to the offending doctor. He estimated that no more than three or four cases a year had to be referred to the Norwegian Medical Association for disciplinary action.

The hospital service, although not as elaborate as ours, seems to be good. The doctor-bed ratio is about 1 to 20. All hospitals operate excellent out-patient departments, freely available for diagnostic procedures requested by general practitioners. At one hospital visited I was informed that 60% of the X-ray and laboratory work was for the doctors practising in the district.

None of the doctors I visited had any serious complaints of patient abuse of the service. One went so far as to say that, in any event, a good doctor would want to see his patients, even if they only thought they were sick.

In Sweden there is *no* compulsory sickness insurance. All plans are on a voluntary basis. For the most part, they are organized by communities, unions, or in some instances by industry. The total coverage is about 60% of the population. In this country, also, I found both state doctors and private practitioners. Both are paid on a schedule of fees rendered basis. However, private practitioners who get no state subsidy are allowed to charge the patient whatever they see fit.

The patient pays the total doctor's bill. On presentation of the receipted account to the sick fund to which he belongs, he is entitled to reimbursement in the amount of two-thirds of the bill, figured out on a basis of the special schedule of fees for state doctors.

If the doctor is a private practitioner, the patient may find that all he has returned to him is, not 66% of the account he has paid, but possibly only 40% or 50%. As a matter of fact, for the whole of Sweden, the average return for the year 1950 to the members of sick funds was, not 66%, but only 57% of the doctors' accounts actually paid.

In Sweden I had the pleasure of visiting a co-operative community just outside Stockholm. It had one large co-operative manufacturing company with some 1,500 employees. This supports a community of somewhat over 3,000 people. The community is self-contained and provides all its own facilities, including its own sickness insurance plan. The general practice is provided by a State doctor who has excellent office facilities. The doctor seemed very efficient and provided a good type of service. He had in his community an eight-bed maternity hospital which was staffed by qualified midwives who looked after

practically all the maternity cases. The doctor himself was nominally responsible for the operation of the hospital, and visited it regularly, but was seldom called upon to assist the midwives in providing obstetrical service.

The State doctor carried on a pretty comprehensive preventive program as part of his responsibility to the community. This included well-baby clinics, pre-school examinations, and a school health service. He also had the responsibility of the supervision of the industry itself, which included, of course, periodic examination of the employees and pre-employment examination of new personnel that the plant might wish to employ. The doctor, I imagine, had a pretty heavy practice, and, like most State doctors whom I visited in both Norway and Sweden, was getting old before his time.

In Sweden there are two schedules of fees, one for cities like Stockholm and one for the rest of the country. The schedule in Stockholm is higher than the one for rural areas. The secretary of the Medical Association explained this difference to me by pointing out that the cost of living is higher in the city than it is in the rest of the country. It would seem to me that the higher schedule should be for rural areas in order to attract doctors there and thus make for a better distribution of physicians.

The director of the Swedish Medical Association informed me that the government had passed a new Act providing for compulsory sickness insurance, but at the moment this had not been brought into operation because of the lack of personnel.

Sweden, by Scandinavian standards, is a prosperous country, and has been able to afford a very considerable amount of new hospital construction since the end of World War II. As a consequence, hospital facilities are better there than in other countries I visited.

Denmark has compulsory sickness insurance. There are two types of membership, active and passive. The active membership, about 90% of the population, consists of all persons below a certain income level, including practically all of the labour force and the majority of the self-employed persons. A passive member is anyone 21 years of age or over who is not an active member. He has to pay a small fee yearly, but receives no medical services or sickness cash benefits. However, such passive membership is necessary for a person to be entitled to invalidity or old age pension.

The method of payment of general practitioners varies between sickness clubs. The capitation basis is now becoming the most common method of payment. The general practitioner is not obliged to work on Sundays or public or national holidays. If he does see a patient on these days, he can charge his fund for the extra service rendered on the basis of a special schedule of fees.

As far as I could gather from the head of the Sickness Insurance Division of the Government, there has not been much abuse by the public of the services available, or by the profession in refusing to provide the medical care that was required. He volunteered the information that the Government, in checking abuse by physicians, receives the greatest possible co-operation from the Danish Medical Association.

One of the sick funds I visited was in Copenhagen. In this city the payment for the services of general practitioners, eye specialists, and ear, nose and throat

specialists is on a capitation basis. A general practitioner's panel is supposedly limited to 2,200 members. This actually means that a general practitioner may have from 3,000 to 3,500 persons on his panel because dependents of members are also covered. In order to try to limit the size of a general practitioner's panel to 2,200 members, the Medical Association itself suggested to the Association of sick funds that any doctor taking more than this number should only be allowed 2 crowns per member per year for the extra members, instead of the customary capitation fee of 13½ crowns. Each sick fund operating in Copenhagen is allocated a district of the city and this is divided into small areas each containing approximately 2,200 members. There is usually only one general practitioner in each area, and the members are supposed to use the area doctor. The majority of the patients in each district do choose the doctor nearest to them. Although this may amount to regimentation of the sick fund members and, to some extent, limitation of the doctor's choice of patients, it does save a considerable amount of the doctor's time, because of the short distance he has to travel to see patients in their homes.

The Executive Secretary of the Danish Medical Association works part-time for the Association, and part-time as a general practitioner on a capitation basis. He explained to me in detail the growth and development of sickness insurance in Denmark, illustrating from the experience of four generations of doctors in his own family. He told me that the Association is quite satisfied with the plan. He believes it is good for the doctors, as well as for the Danish people.

In the Netherlands, or Holland, as we call it, medical care has a great many interesting features, but time will permit me to mention only one or two of them. In the Netherlands, as in Norway, there is compulsory sickness insurance for wage earners and their dependents, and a voluntary plan for other persons, both on a capitation basis. I found in Holland the strictest kind of supervision of the general practitioner service. A general practitioner cannot call a consultant or send a patient to see a consultant; and he cannot send a patient to a hospital without getting authority from the controlling doctor of the district. The same type of control applies to the provision of certain expensive medicines.

The officials of the Netherlands Medical Association were quite frank in telling me that their Association believes it best to have a strict control system. They thought it was only fair to the members of the sick funds that every effort should be made to reduce to the minimum unnecessary use of hospitals, consultants, specialists and expensive drugs. They did not think that this method placed any undue hardship on the doctor because, in case of emergency, he could get permission from the nearest physician to admit a patient to hospital or to refer him to a consultant. The reason for the Association's viewpoint, I gathered, was that originally, when the doctors operated many of the funds themselves, they kept strict watch over the provision of medical care.

The services being provided by the general practitioner appear to be very good. I spent a day with a rural doctor who has a panel of some 3,500 persons in a very compact area about 12 miles square. He was also president of the local sick fund. He was quite opposed, both as president of the fund and as a practising physician, to any change in the present method of paying practitioners. He was quite insistent that sooner or later all specialists and consultants would be paid

on a capitation basis. This refers, of course, only to those consultants and specialists that work outside of hospitals, as all hospital medical staffs are on a salaried basis.

Although the general practitioner's capitation fee appears to be low, he does make considerable income over and above the actual money received in capitation fees for the people on his panel. The doctor I visited did most of his own maternity work in the home, some 75 cases a year, and for these he received a special fee of 30 guilders per case, plus a fee for seeing the mother during her pregnancy. He also receives a capitation fee of 2.5 guilders for all persons on his panel for the provision of ordinary drugs. He has available in his own district the services of a well-trained midwife-housekeeper. She is capable of assisting the doctor at a confinement, and, since she has had training in household management, she is able to run the home until the mother is up and around. The one I saw appeared to be very efficient.

Now, to leave the continent and visit Great Britain, I might recall that in the spring of 1948 I had the privilege of spending 10 days in that country. The National Health Service, which was then being organized, and which went into effect on July 5th of that year, was, administratively, a tremendous undertaking, and bound to suffer from many growing pains.

Last fall, on talking to various individuals in Great Britain, including the officers of the British Medical Association and its Scottish branch, my impression was that the service was better than we have been led to believe as a result of the unfavourable publicity given to it on this side of the Atlantic.

During my visit I had an opportunity of seeing one of the production-line types of practice. It was run by a Canadian graduate who, after the First World War, settled in England some forty miles south-east of London. There are eleven doctors altogether, including a young physician under training, in this area, and they were operating as a group. They had a full panel of 44,000 persons. There were two main reasons why they had decided to practise as a group. The first was in order to establish a roster, so that there might be somebody on call all the time for holidays, Sundays, etc. Secondly, the Canadian head of the group was sure that by joining together they could very materially reduce their administrative costs, which would actually mean a material increase in their net income. They had reduced such costs from the allowable 35% to 15%.

When I went into the waiting room of one of their four surgeries, which had 3 doctors in attendance, I found somewhere in the neighbourhood of 90 to 100 people waiting. This meant, if these people were all patients, about 15 patients an hour for each of the doctors present. When I suggested to the head of the medical group that this was a lot of patients for a morning surgery session of 2 hours, he said: "Well, all the people you saw in the waiting room were not patients. I expect you saw a lot of women with children." He informed me that both the woman and the child would not be there for medical service, at least not very likely. It would either be the child or the mother, because the latter would have to bring the child with her if it were under school age. I estimated that this would probably reduce the total number of patients by a third. He then said, "Did you see any men in the group?" I said, "Yes, probably there were 20 men." "Well," he said, "this morning's surgery is not for men. We have an

evening surgery from 5 to 7 for them. Most of the men will either be in for a repeat prescription or certification, which, as a rule, is just a matter of a minute or so." Still, in my opinion, with all these reductions, the load at this particular surgery was heavy enough for its three doctors.

I believe that the British plan might be working better in Scotland than it does in England. Certainly, the Scottish doctors that I visited and saw at work were providing a very good service and actually had a better insight into the effect of social environment on the health of individuals than most of our recent graduates in Canada. Their attitude seemed to be, in respect to their patients, not so much, "What disease is this patient suffering from?" as it was, "Why did this individual take sick?" In other words, what part has his social environment played in the cause of the illness?

I, personally, have no doubts as to the final outcome of the British National Health Service. Despite the many administrative difficulties they have to overcome, it is bound to succeed. The reason I say this is because both the British Medical Association, its Scottish branch, and the British and Scottish Ministries of Health are now working closely together to ensure that it will.

When one considers the programs for prepaid medical and hospital care in Europe, with the exception of the National Health Service in Great Britain and the State doctors in Norway and Sweden, one finds that they are not health insurance programs (and, indeed, they are not called this), but are, as they are called, sickness insurance plans, in that they make provision for services in kind when persons become sick, and also for cash indemnity payments to persons who are ill and unable to work. The prevention of disease is usually the responsibility of the state and/or local health departments.

I believe that any plan for real health insurance should include health promotion, prevention, treatment and rehabilitation services, and not just sickness insurance alone. It should be so organized that it will do the utmost in promoting health and preventing disease, in order to reduce to the minimum the necessity of providing treatment for those who become ill, especially in hospital.

This was the main reason why in Canada in 1948 the National Health Grants Program was brought into operation—to try to establish a sound foundation of health promotion and disease prevention upon which the Provinces could add, in a logical order, piece by piece, the necessary services to ultimately give Canadians a complete National Health Service as planned for in the 1945–46 National Health proposals.

I was very much impressed with the philosophy behind the development of sickness insurance in continental Europe and the National Health Service in Great Britain. It seemed to me that all the countries I visited were more mature socially than we in Canada. People in those countries appeared to be exceedingly law-abiding. In Norway, for instance, one seldom saw a policeman on the street, and none of them carried guns. They are not law-abiding in the sense of being at all downtrodden or subdued, but in the sense that they accept the principle of the organization of society for the common welfare of the people. Since the war they have been living together in a reasonably stable, but rather crowded society, and have worked out an intangible code of living, based on a fair degree of co-operation, and yet, in most instances, they have avoided regimentation. In Great

Britain, particularly, they admire nothing more than an individualist or an eccentric.

In every country visited, there now is the closest possible co-operation between the State, the providers of service, and the public. Because this prevails, nothing but good will result.

In all the countries visited, the evolution of state-operated sickness insurance has had a similar pattern—from voluntary sick benefit societies operating independently, to sickness insurance clubs or sick funds under Government supervision, with some standardization of benefits and payments to physicians, followed by compulsory insurance for wage-earners under a specified income level, with voluntary insurance for others, and, finally, as in Denmark and Great Britain, compulsory insurance for all.

One would be loath to suggest that any of the plans I saw in operation would be satisfactory for Canadian needs. However, in their own setting, which is very different from ours, they do apparently provide a very acceptable service for their people. All of us can learn much from a critical evaluation of the good points and bad features of the various plans now in operation in Europe.

No Canadian, and certainly not one of us in this room, can take a negative attitude to the problem of extending health services. In fact, the present international situation makes it imperative that all of us do everything we can to ensure the highest possible standard of good health for all our people. The very survival of this democracy of ours may depend on this.

We know that the process of action and reaction between different groups seems to be inescapable in human affairs. However, I cannot see, when all parties concerned—Government, organized medicine, health departments, and the public—agree in the objective of the best possible health services for everyone, within the resources of the country, why there is any reason that the furtherance of a complete national health service should not be energetically pursued. Indeed, there is every reason why it should, safeguarding at all times, of course, the rights of physicians and patients. The professional groups, with their knowledge of what can and should be done, and Government, with its desire to serve the people and implement adequate plans for such services, should be united. If they are, everything that science has to offer for the promotion of health, the prevention of disease, and the care and rehabilitation of the sick can, over a reasonable period of time, be made available to every Canadian. The measure of our failure to agree on the methods of accomplishing this objective seems to me to be the measure of our failure as an intelligent society. Surely there can be no higher endeavour for organized public health and organized medicine than to strike out boldly in new directions when the ultimate goal is better service to humanity.

Letter from Great Britain

The Health Centre in Britain

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Dear Editor,

BEHIND the discussions about comprehensive medical care which have engaged so much of our time and thought over the past thirty years there has always lain, somewhat shadowy, the outline of the health centre. Much that has been said in our correspondence of the past five years about the prevention of illness and the promotion of health in Britain logically demands a centre in which the family doctor, the preventive health services, and the agencies for social medical care can come together. This is the concept which was first placed before the public eye by the Dawson of Penn report (the Interim Report of the Consultative Council on Medical and Allied Services) in the early 20's and finally written into the statute of 1946. In this embodiment of many of the requirements of a "full health and medical service" the family doctor has the opportunity to work in a team with his colleagues, with the Medical Officer of Health and with those other members of the modern health service, of whom so much has been said in earlier letters: the midwife, the health visitor, home nurse, home help, with the backing of a specialist in socio-medical care, the almoner and the psychiatric social worker; here the family doctor's services in "medical care" (together with those of the dentist and pharmacist) can be integrated with those parallel developments of preventive medicine, the antenatal clinic (discussed in my last letter), infant welfare and school clinics and with measures to protect the community by vaccination and immunisation, with the new machinery for "care and after care", and with health education. From this focal point the family doctors can go out not only to treat and alleviate sickness, but to prevent disease and promote health. The health centre gives the doctor a fully manned surgery with secretarial and nursing help, away from his home, and it gives him the opportunity for off duty and holidays upon which his health, and ultimately that of his patients, must largely depend. The health centre is an expression of the belief of this country in the family doctor both as the fundamental unit of a comprehensive health service and as the key to health promotion in modern society; but it is more than a mere belief, important as that may be: it provides the means, physical and psychological, to take the family doctor on to new spheres of work in which he is the parish priest of medicine.

The health-centre concept has not always meant the same thing to everybody. To some it has denoted the "family health centre" as at Peckham or Coventry, where the effect has been "to study the development of families, to keep check by periodic overhaul and to pick off diseases in their early stages". Of this type of health centre Barlow has further said, "If in our society there already existed adequate institutions for the ontogeny of families, the nurture of individuals and the integration of local communities, the situation would be different." From this he implies that the social diseases of modern society as illustrated by the "high incidence of neurosis, divorce and juvenile delinquency" call for a new organisation in which families can co-operate "in the shaping of their local community" so that ultimately it will itself "nurture to the best advantage the developing life of its constituent members". This he believes a health centre could accomplish. These experiments in family health studies and family co-operation, progressive and full of hope for us all, are, of course, not to be regarded as health centres within the meaning of the 1946 Act. Nor are these centres to be so regarded in which beds are available for observation and treatment. This admirable arrangement, which we have been accustomed to see in operation as a "cottage hospital", is as far removed from the health centre now proposed as is Peckham or Coventry. Nor is the modern approach to the health centre identical with that in the Penn report which described a primary health centre with facilities for X-ray, operations and laboratory investigation and secondary health centres for specialist services.

Section 21 of the 1946 Act says:

It will be the duty of every local health authority to provide, equip and maintain and staff health centres at which facilities shall be available for all or any of the purposes listed. These are (a) for the provision of general medical services under Part IV of this Act by medical practitioners; (b) for the provision of general dental services under Part IV of this Act by dental practitioners; (c) for the provision of pharmaceutical services under Part IV of this Act by registered pharmacists; (d) for the provision or organisation of any of the services which the local health authority are required or empowered to provide; (e) for the provision of the services of specialists or other services provided for out-patients under Part II of this Act; or (f) for the exercise of the powers conferred on the local health authority by section one hundred and seventy-nine of the Public Health Act, 1936, or section two hundred and ninety-eight of the Public Health (London) Act, 1936, for the publication of information on questions relating to health or disease, and for the delivery of lectures and the display of pictures or cinematograph films in which such questions are dealt with.

Thus the health centre when fully developed will contain four elements: the unit for medical care by the family doctor (dentist and pharmacist), the unit of preventive care by the local health authority, facilities for the consultant, and arrangements for conducting health education. With this catalogue of simple ingredients there can be little difference of opinion: discussion is now upon the precise meaning of this prescription in terms of bricks and mortar and of the services of various professional people. With the publication of the report (H.M.S.O. 176 (1951)) of the Messer Committee of the Central Health Services Council these further details are perhaps now better understood than at any time within the past thirty years during which the idea of the health centre has been under discussion. We should therefore examine the Messer Committee findings.

THE STAFFING OF HEALTH CENTRES

The health centre should accommodate 4-8 general practitioners serving a population of 10,000-20,000 and covering an area one mile in diameter. The doctors should not be in competition (which may prevent co-operation and exchange of knowledge and prejudice the development of group practice) and they should not ordinarily employ assistants. Each should pay a rental equivalent to the cost of providing themselves with accommodation locally (a "reasonable" but not an "economic" rental); there should be a duty doctor only when the doctors do not live in the area. A state registered nurse and a receptionist should be provided for the doctor's unit. The services of a physiotherapist are recommended (perhaps a little optimistically, in view of the present shortage). There should be a permanent official in the clinical side room. The place of the consultant in a health centre is to be governed by the requirements of the patients; he should give his services to the centre for matters which do not require special accommodation and equipment, and which will not mean, for the patient, a second journey to hospital. As is the case with domiciliary visiting by specialists, which is one of the services now offered under the Health Act, this will have the advantage that the specialist will get "first-hand information about home economy and industrial conditions under which the patient lives and works"; the family doctor will "be kept in close touch with the latest developments of medical science and the type of case which ought to be referred to a specialist"; hospitals will be at least partially relieved of congestion. The health centre should ordinarily accommodate the dentist who will gain from the closer partnership with the doctor (and vice versa), but in some instances one dental unit might serve more than one health area: the number of dentists should be 2-4 for both "priority" and general dental work, with an equal number of chairside attendants. The need for a pharmacist in each health centre (who should when present also be responsible for drugs, dressings and solutions) will depend on local circumstances. The local health authority and the local education committee should be represented in the centre by day-to-day clinics for maternity and child welfare (ante-natal, post-natal and child welfare), clinics for school health (minor ailments, refraction, dental, orthoptic, speech therapy), and by certain specialist clinics (paediatric, obstetric, child guidance). Health visitors and home nurses, midwives, should work from the centre, with a home-help organiser, and a socio-medical worker to guide the care and after-care service. It is not considered advisable to incorporate the tuberculosis clinic in the health centre in view of risks of infection to children and public alarm.

The health centre is a building to be equipped and staffed for administrative purposes by the Local Health Authority, and with services to be provided by a number of different bodies and individuals; the consultants by the regional hospital board, the doctors and dentists in general medical work by the Executive Council, dentists for priority dental work and doctors and nurses of school work by the Local Education Committee; dentists, doctors and nurses for maternity and child welfare and socio-medical workers for care and after-care, midwives and home helps, by the Local Health Authority; the pharmacist (in contradistinction to the doctor and dentist in general medical work) to be paid by the

Local Health Authority. This arrangement, designed to preserve the professional freedom of the staff, appears more complicated on paper than will probably be the case in practice; there should be little difficulty in securing complete integration. The health centre is likely to have unusual qualities of unification and may in some respects be likened to a "catalyst" in a chemical reaction, which so regularly and so completely persuades unwilling associates to combine together. It is unfortunate, in view of the many benefits that are likely to arise from their general application, that health centres must be limited to areas of considerable population density. As now described, they are not likely to be practicable in rural areas, and it also seems likely that some parts of urban areas (mainly industrial with a comparatively small resident population) may be classed as unsuitable for health centres.

CONSTRUCTION OF HEALTH CENTRES

(a) *The Comprehensive Health Centre*

The Messer Committee recommends (apart from the general suggestions to establish health centres in new communities before individual practice in separate premises begins, and to reserve suitable sites whenever possible) that the Government should build a few comprehensive health centres (for purpose of trial and error); these are presumably the counterpart of the Woodberry Down health centre at Stoke Newington, which is the first of 162 proposed centres for London (each covering 20,000 persons). Such health centres are designed on the grand plan; each requires a site of approximately one and one-half acres and can be built at an estimated cost of £187,275. The precise details of construction can, of course, vary widely and are certain to change with the passage of time and with experience of the working of centres in different parts of the country. School health and maternity and child welfare clinics, together with a hall for health education (lectures and demonstrations, e.g., household shopping and cooking, films and exhibitions, leaflets, booklets and a health magazine) will follow the traditional layout of the multi-clinic as established in recent years, with provision for child guidance and other special undertakings. The following brief details are given in illustration of the present trends of thought about group practice in the section designed for the family doctors. Each doctor is to have his own consulting room (with lavatory, basin, cupboard for diagnostic instruments, small sink with drawer, gas point for urine testing, desk, telephone); an examination room large enough for patient, nurse and doctor (with couch); a waiting room for 30 persons (or one for 2 doctors for 40 persons). There is to be a separate room for daily dressings and minor operations and a clinical side room (with bench, cupboards, sink, gas and electric points and a cupboard with outfit for sending specimens to laboratories). Each dentist should have a surgery (with one spare surgery for general use, and one dental X-ray machine); each centre requires a dental waiting room, an interview room and a dental X-ray developing room; there should be a dental workshop in each centre. A dispensary will be needed when pharmaceutical work is undertaken, with facilities for preparation of aseptic solutions, storage and drugs, dressings, stock preparation, and a dispensary waiting room. X-ray apparatus (other than dental) is not to be provided if adequate facilities are readily available elsewhere.

(b) *The Simple and Economical Unit (Short-term)*

Such large, comprehensive and expensive health centres are unlikely to materialise in any but small numbers and in the largest centres of populations; they may well remain an idle dream. This makes the second recommendation of the Messer Committee of exceptional importance. Here the proposal is for more simple and economical accommodation provided in areas where satisfactory clinics already exist and where the building of a comprehensive health centre would not be justified. In this the waiting room, cloak room, sanitary accommodation, enquiry room and general office would be combined for 2 or 3 doctors; there would be no clinical side room (urine testing in the consulting room or in nurses' treatment room). The dual use of rooms with clinics and the complete sharing of doctors would lead to further economies and space. Such simple arrangements would go far to introduce on a wider scale the grouping of practice, and the integration with local authority clinics and other facilities, which is the essence of the health centre. With even this measure of simple construction and organisation it should no longer be possible for the Central Health Services Council to hear, as they did, evidence of "*General practitioners who do not know the other doctors and dentists practising in the same neighbourhood and have limited knowledge of the local health services available for their patients*"; of "*the need to make it easier for midwives, health visitors and home nurses to meet doctors to discuss their patients*"; and of the "*inadequate exchange of reports between general practitioners and the maternity and child welfare and school health service clinics*". If the provision of such simple units could now take place on a wide scale, medical practice in Britain would embark on a new and fruitful chapter in its long history.

THE HEALTH AREA

There is always a danger that the eye can be too easily caught by the glamour of physical assets, to the exclusion of the less tangible abstract concepts. This trap, as we have seen throughout medical history, is one into which it is only too easy for both doctors and lay people to fall when matters of health are under consideration. The attraction of the building of hospitals has already led us too far down the glamorous path of curative medicine, when health and strength might have been ours at less cost of time and effort by expenditure in the preventive field. It is timely, therefore, to end this brief reference to the newest of all the great array of medical gadgets, and particularly when the great part to be played by the health centre has been so strongly advocated, by an expression of hope that we shall not be dazzled and diverted from our object by the magnificence of a mere building program. The health centre is not just a building. However much the architect can infuse life and meaning into such a structure (and to that end let us give him all our support), the building is a mere lifeless medium within which the pulsating, professional life of the best that our universities can produce will have their being. In the end it is upon the knowledge, integrity and purpose of the people who will work within the health centre that success will come in any scheme for comprehensive medical care allied to preventive medicine.

But more than this we must not forget that centre means "the middle point towards which all things move or are drawn". What we are really concerned with is not a building nor even a building full of talented professional men and women, but an area of which the building is a centre. This area is full of ordinary people. It is the work among these folk in their homes, schools, factories, among their anxieties, complexes and worries, that counts most. The health centre is a convenient point from which can radiate out the many services of social and preventive medicine and of medical care today, in collaboration and understanding, among the 2,000-4,000 families that live within its radius.

Finally, it has long been understood that teaching wholly within the hospital precincts does little to widen the horizon of the average student and to enable him to take in the full meaning of social medicine. His attention is too much focused, and for too long, upon the individual patient in bed and away from home. The health centre may help to remedy this deficiency. Perhaps some university will be able to take under its special care one of these new gadgets and, like the gallant experiment now in action at Edinburgh, show the student at first hand what it really means to work in a group and as a member of a team in the homes of the people.

International Immunization Procedures

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CANADA'S early quarantine history goes back to the days of sailing ships laden with pestilence-stricken immigrants. Such persons were removed to our old island quarantine stations, where many of them died. Our quarantine officers often contracted these diseases and died along with the majority of their patients.

In contrast, our efforts today are to prevent, through immunization and international co-operation, the arrival of infected persons. Countries where major infectious diseases exist have agreed to take measures to prevent infected persons from departing. Through international co-operation, measures are enforced to help control insect and vermin vectors, which play such an important part in the transmission of plague, typhus, relapsing fever, and yellow fever.

SMALLPOX

In Canada our greatest concern, from the standpoint of quarantine, is smallpox. Persons who have been exposed to it are travelling by air from infected countries to various European centres, where they change planes or board vessels for Canada. If infected with smallpox, these people could infect all susceptibles with whom they came in contact on the conveyance. Also, it is possible for persons possessing a relatively small degree of immunity to develop modified forms of the disease which are highly infectious but which, because of their atypical appearance and prolonged incubation periods, may escape detection and be a hazard to many people.

Persons entering Canada are now required to present evidence of having been vaccinated against smallpox within the preceding three years. This requirement does not apply to persons coming from the United States, Alaska, the Hawaiian Islands, Cuba, the Bahamas, Bermuda, Iceland, Greenland, St. Pierre and Miquelon. Persons from all other countries must have a vaccination certificate, which is normally acceptable as evidence of immunity from smallpox.

In order to ensure development of immunity from smallpox, proper care must be taken to see that a living vaccine is used and that the proper technique has been carried out. Vaccine from the laboratory should be stored at the appropriate temperature without freezing. If transported for any prolonged period in the physician's vest pocket, it will certainly become dead and worthless for immuniza-

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tion purposes. When a person is being vaccinated for the first time, the skin puncture method is recommended. The arm is cleansed with alcohol, which *must* be allowed to become perfectly dry before the vaccine is applied. The vaccinator then holds the needle parallel to the skin and depresses the point of the needle through the vaccine into the skin. In revaccinating persons the scratch method is recommended. By this method a heavier inoculation of the virus is obtained which is more likely to produce a primary take.

The arm at the insertion of the deltoid muscle is the site of choice for vaccination. Smallpox vaccinations should never be carried out on the thigh or on the leg, especially if the subject is an infant. Even in adults, vaccination on the thigh or leg is highly undesirable, as severe cases of inguinal adenitis often occur.

In order to avoid infection of the vaccination site with organisms, such as tetanus, the subject should be instructed not to wear a bandage or shield, or other covering. In children the arm should be covered continually by some loose-fitting garment so that, in scratching, the child's fingers will not become contaminated with pus which may be transmitted to other parts of the body or to the eyes.

Of primary importance in the care of a primary-take lesion is the maintenance of dryness and a free flow of air about the vesicle. In addition, a relatively sterile surface may be maintained by sponging the area gently with alcohol and cotton twice daily. Infection of the site of vaccination with pyogenic organisms sometimes occurs. *Staphylococci* may cause cellulitis, or *haemolytic streptococci* may at times cause lymphangitis, adenitis or even septicaemia. Generalized vaccinia may occur following vaccination, usually in cases of dermatitis, with marked itching where the fingers become contaminated with the lymph which is then rubbed over widespread areas of weeping lesions. Great care should be taken if it is necessary to vaccinate an infant with eczema and it is usually preferable to wait until the eczema is cleared up.

Post-vaccinal encephalitis is extremely rare in Canada and the United States but occurs occasionally in Europe. The severity of this complication is apparently not related to the vaccinal reaction. The onset is usually abrupt, with high fever, delirium, and at times coma or convulsions. The usual signs of cerebral irritation are presented. The mortality of this complication is about 35% and there is no specific treatment.

Canadian Quarantine Regulations provide for exemption from vaccination by the quarantine officer at the port of arrival of persons when, in his opinion, vaccination would be liable to endanger health.

CHOLERA

Cholera vaccine may be obtained from the Connaught Medical Research Laboratories for the immunization of persons who intend to proceed immediately to a country where that disease is prevalent. One-half c.c. of the vaccine is given subcutaneously as a first dose. This is followed by a second injection of 1 c.c. three to four weeks later, which, in turn, may be followed by a third subcutaneous dose of 1 c.c. three to four weeks after the second dose. In urgent cases the interval between the injections may be shortened to one week. Any immunity conferred by the vaccine against cholera appears to be only temporary, lasting

for a few months. Persons who expect to remain in areas where cholera is present should receive 1 c.c. of cholera vaccine every six months after the initial series of inoculations. Many countries require persons from areas where cholera is present to have certificates indicating vaccination against cholera. As a general rule, certificates are valid for a period of seven days to six months after inoculation.

YELLOW FEVER

Persons proceeding to countries where the vector of yellow fever exists are usually required to be immunized against yellow fever. Certain of these countries exempt travellers who have not previously been in an area in which yellow fever is endemic.

Certificates of vaccination against yellow fever are valid for ten days to four years after inoculation or within four years of re-inoculation.

Yellow fever vaccine virus is subject to very strict control. The living virus is stored in ampoules of nitrogen which must be kept continuously at a temperature below freezing. Elaborate arrangements have been made for the transportation and shipping of the vaccine in thermos containers stocked with dry ice.

Due to the special precautions necessary to maintain the virus of this vaccine in a living state and due to Canada's responsibility to other countries in ensuring that such precautions are, in all cases, being taken, the Quarantine Service of the Department of National Health and Welfare has established fourteen centres at various points across the country. Persons in Canada requiring vaccination against yellow fever with a valid certificate may obtain such inoculation only at one of these centres. The centres most conveniently located to serve residents of Ontario are in the cities of Toronto, Ottawa, Winnipeg and Montreal. For the reasons I have given, it is not possible to release yellow fever vaccine for administration by private physicians.

TYPHUS

Typhus vaccine, combined epidemic and murine, may be obtained by all practitioners from the Connaught Medical Research Laboratories, University of Toronto. The vaccine should be stored at a suitable temperature, preferably below 50° Fahrenheit. The vaccine is administered subcutaneously, the first dose being 1 c.c., followed within a week or ten days by a second dose of similar proportions. Reinforcing doses of typhus vaccine may be given at the beginning of the typhus season or early in November and a second reinforcing dose of 1 c.c. in the middle of the typhus season or early in February.

In areas where typhus is endemic it is frequently customary not to inoculate children under 10 years of age, due to the milder clinical course of the disease in persons of this age group.

PLAQUE

Killed vaccines are not of much practical value in infected areas due to the difficulty of administering the frequently repeated injections to large numbers of the population. In native populations, widespread active immunization, with an avirulent living plague vaccine, has proven valuable. This vaccine is not available

in Canada. The killed vaccine may be obtained from Cutter Laboratories, Berkeley 10, California, U.S.A.

In the case of international travel, inoculation against plague is generally not recommended.

It is always difficult to decide just what immunization procedures should be recommended to travellers because the requirements of different countries vary so greatly. Any person proposing to go on an international journey should be advised to be vaccinated against smallpox because this is a requirement for entry by many countries and is also required by Canada before the traveller may return to this country.

Most of your enquiries will probably be from persons proposing to travel to Europe or the West Indies. In general, vaccination against smallpox is the only requirement.

Immunization against cholera is probably advisable if the traveller is visiting the East Indies, the Middle East, the Far East, and Middle and North Africa.

Immunization against typhus may be advisable for travellers visiting these countries and, in addition, Western and Northern South America and Central America.

Yellow fever immunization is advisable for travellers to all countries in the middle and northern parts of South America and Africa.

The United States Public Health Service has published a booklet entitled "Immunization Information for International Travel",* which summarizes the requirements of various countries and also contains considerable useful information of a general character.

Copies of the International Certificate of Inoculation and Vaccination can be obtained free of charge on application to the Quarantine Service, Department of National Health and Welfare, Ottawa. As I have indicated previously, all immunization procedures, except for yellow fever, may be carried out by any physician. He should fill in all the information called for on the certificate and should sign it. In certain countries the certificate has more value if it is stamped with the official stamp of some health authority, either municipal, Provincial, or Federal. This information is usually given to any traveller who applies to my office for a blank form. The stamping of the certificate by the health authority is not intended in any way to guarantee the effectiveness of the procedure which has been carried out, but is merely to confirm that the person who performed the vaccination or inoculation was qualified to do so. A person carrying an International Certificate which has been properly completed and which has been stamped by some health authority is less likely to meet with trouble when he arrives in a foreign country. The periods of validity of the various certificates have been established by international agreement on the advice of experts in quarantine and epidemiology and are generally acceptable throughout the world.

*Obtainable from the Superintendent of Documents, Government Printing Office, Washington 25, D.C., at a cost of 20 cents a copy. There is a discount of 25% on orders of a hundred copies or more, provided they are delivered to the same address.

Tuberculin Patch Testing Survey of the Rural School Population in Southwestern Manitoba

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A TUBERCULIN patch-testing survey of the entire school population in the Virden Local Health Unit was undertaken during 1951. The survey extended over a nine-month period because of the many schools and the large area encompassed by the health unit.

The purpose of the survey was to discover the incidence of tuberculin positives in the school population of this area, which is a typical rural agricultural area.

The Vollmer tuberculin patch test, supplied by Lederle, was used in this survey because of the time factor. The Mantoux test would have been preferable but it would not have been possible to complete the survey using the Mantoux test exclusively unless undertaken as a special survey. About 40% of the children and teachers in the survey were previously Mantoux-tested and the results agreed with the results from the patch test. It is felt that the patch test provides a rough index of the incidence of positive tuberculin reactors.

In most of the schools the patches were applied on a Monday, removed on a Wednesday, and interpreted on a Friday. At the onset of the survey the patches were applied, removed and interpreted by the medical director, but as the survey progressed the patches were applied and removed by the nursing staff of the health unit. Eventually in the outlying districts it was found that the teachers could easily be instructed in the removal of these patches. With this arrangement the survey was undertaken by staff of the unit without interruption of the program of local health unit activities.

The Virden Local Health Unit comprises eight incorporated rural municipalities, three incorporated towns and one incorporated village. It is roughly rectangular in shape, covering an area of about 2,400 square miles (60 x 40 miles). The unit is west of the city of Brandon and is bounded on the west by the Saskatchewan-Manitoba interprovincial boundary. The preliminary figures from the 1951 census give the population as 16,869. The largest centre, Virden, has a population of 1,700 and it is the headquarters for the unit. It will be seen that the population is sparse, averaging seven people per square mile.

The survey in the unit was conducted with the permission of the school boards of the larger schools. At the time of the survey the school population was made up of 3,073 school children and 155 teachers in the 92 schools of the unit.

*Since this article was submitted for publication, the author has joined the staff of the Division of Industrial Hygiene of the Ontario Department of Health.

Table I gives the number of schools, school children, and teachers in the area.

TABLE I

Number of Schools, School Children and Teachers in Health Unit Area, 1951

<i>Building</i>	<i>No.</i>	<i>Pupils</i>	<i>Teachers</i>
One-room	66	980	65*
Two-room	10	437	20
Three-room	4	232	12
Four-room	7	643	28
Five-room	3	355	15
Seven-room	1	171	7
Eight-room	1	255	8
Totals	92	3073	155

* One school without teacher.

It may be observed from this table that the majority of schools are one-room structures with an average of 15 pupils per school. There has been little consolidation of schools in this area. The larger schools are naturally to be found in the towns, and the one-room schools are scattered throughout the area—many of them off the main roads.

The ages of the school children varied from 5 to 20 years. The ages of the teachers were not obtained. It may be of interest to note the number of children enrolled by year of birth and sex. Table II gives this information.

TABLE II

Number of Children Enrolled in the Schools by Year of Birth and Sex,
Teachers by Sex Only, 1951

<i>Year of Birth</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
1946	6	6	12
1945	127	115	242
1944	162	151	313
1943	185	188	373
1942	166	178	344
1941	133	135	268
1940	146	148	294
1939	149	131	280
1938	149	115	264
1937	103	108	211
1936	86	105	191
1935	51	70	121
1934	40	58	98
1933	27	21	48
1932	4	6	10
1931	3	1	4
Total	1537	1530	3073
Teachers	27	128	155

A study of the enrolment by grade and sex (not tabulated in this article) discloses more males than females in the eight grades of elementary school, and more females than males in the high school grades. Several factors may account for this relationship but the main factors seem to be excess of males over females starting school; a higher male failure rate; and withdrawal of more males than females to engage in occupational pursuits after Grade VIII. The over-all effect is to equalize the total number of each sex in the twelve grades of the school

population. The excess of female teachers over male teachers is a characteristic of the profession.

Various factors interfered to prevent satisfactory patch testing of the entire school population. There were three chief reasons for this: school absenteeism, premature loss of patches, and refusal to allow the patch test. Altogether some 101 males and 71 females of all grades were absent on the days on which the patches were applied. The higher absentee rate in boys may be, in part, explained during the fall months when many of the older boys assist in the harvesting of farm crops. Only one teacher was absent at the time of application of the patches. A certain number of individuals lost their patches too soon for a satisfactory result; there were 74 in this group, none of them teachers. Of this group, 65 were boys and they lost their patches in athletic endeavour usually. A total of 18 people refused the patch test. Nine of these were school children where the testing was refused for religious reasons, and nine were school teachers who refused without giving reasons. This group of people was excluded from the tuberculin patch testing survey, so that the total number of satisfactory patch tests amounted to 2,818 school children and 145 teachers.

The incidence of positive reactions was, as anticipated, quite low. Table III shows the number of positive reactions by year of birth and sex for the school children and by sex only for the teachers. The percentage of positive reactors has taken into account the number in each age group who were absent, who lost their patch prematurely, or who refused the test.

TABLE III
Number of Children with Positive Reactions by Age and Sex,
Teachers by Sex, 1951

Year of Birth	Male	Female	Total	Percentage Reactors
1945	2	3	5	2.2%
1944	4	2	6	2.1%
1943	4	3	7	2.0%
1942	4	4	8	2.5%
1941	4	3	7	2.9%
1940	4	8	12	4.5%
1939	3	1	4	1.6%
1938	3	2	5	2.1%
1937	1	4	5	2.6%
1936	3	4	7	4.0%
1935	2	0	2	1.8%
1934	0	0	0	—
1933	1	2	3	6.7%
1932	0	2	2	22.2%
1931	0	1	1	25.0%
Total	35	39	74	2.6%
Teachers	5	20	25	17.2%

There were 74 positive reactors among the school children and 25 among the teachers. The over-all incidence of tuberculin-positive children in the group of 2,818 children was 2.6% and in 145 school teachers it was 17.2%. The low incidence of tuberculin-positive children in this area was anticipated because of the sparse population of the area. The teachers represent a cross-section of adults across the Province of Manitoba.

It was also anticipated that the incidence of positive reactors in the school

children would vary directly as the age increased. This was borne out in the older age groups in Table III (1931 to 1933 inclusive). However, the number of school children in these age groups was small and too much significance cannot be attached to the percentage incidence of reactors in these. In regard to sex differences, there did not seem to be any significant difference either in the child group or teacher group of reactors.

Table IV gives information regarding the 74 tuberculin-positive children.

TABLE IV
Information Regarding 74 Tuberculin-Positive Children

	No.	Percentage of Positives
Known Positives	4	5.4%
Known Contacts from Health Unit Register	13	17.6%
New Immigrants to Canada	5	6.8%
Half-Breed Children	6	8.1%
Totals	25*	33.8%

* 3 of Half-Breed children were known contacts.

If the known positives and contacts are excluded from the total of 74 positive reactors in the school children, a total of 57 school children (out of 2,801) were detected who were unknowingly exposed to tuberculosis under conditions in rural Manitoba. This is an incidence of 2%.

Two children were recorded as doubtful or allergic reactors, an incidence of .07%.

Recently a report has appeared in which 3,294 Winnipeg school children were patch tested.¹ The authors here found an over-all incidence of 7.9% of elementary school children with a positive tuberculin patch. They were able to divide their children into two groups—one from a congested area and one from a better-class area. The incidence of positive reactors in the congested area was quoted as 8.5% as compared with 3.5% in the better-class area. This report dealt only with elementary school children in the City of Winnipeg. Figures from the survey in the Virden Local Health Unit which would be comparable give the incidence of tuberculin-positive elementary school children as 2.3%, considerably less than city children.

SUMMARY

A tuberculin patch testing survey of the entire school population of a southwestern Manitoba rural area was undertaken in 1951.

Satisfactory patch testing was performed on 2,818 of 3,073 school children and 145 of 155 teachers (91.1% and 93.5% of each group respectively).

The over-all incidence of tuberculin positive school children from all grades was 2.6%. The incidence of tuberculin positive teachers was 17.2%.

About one-quarter of the positives in children were known as contacts or known positive.

Comparison was made with the incidence of tuberculin positive children in city schools as reported in a separate survey.

The survey was of value in fixing the incidence of tuberculin positive school children and teachers under rural conditions in Manitoba.

¹Cadham, R. G., and Carey, S. L. Manitoba Med. Rev., 1951, 31:10.

A New *Salmonella* Type: *S. chicago*

H. J. SHAUGHNESSY, PH.D., FRANCES FRIEWER, AND
MATTHEW LESKO

*University of Illinois, College of Medicine, and
Illinois Department of Public Health,
Division of Laboratories, Chicago, Illinois*

TWO cultures of an organism of the *Salmonella* group were isolated from the fecal specimen of a food handler on August 27, 1951, during a routine survey, and submitted for typing by C. P. Macaluso, bacteriologist at Chicago State Hospital. The food handler was asymptomatic and could not recall any attacks of gastro-enteritis.

The motile, gram-negative organism possessed the morphological and cultural characteristics of the *Salmonella*. Acid and gas were produced from glucose, mannitol, arabinose, rhamnose, xylose, dulcitol, maltose, sorbitol, galactose and trehalose. Saccharose (sealed), lactose (sealed), inositol, inulin, salicin, glycerol, dextrin, cellobiose, and raffinose were not fermented. The organisms utilized citrate and d-tartrate and produced hydrogen sulfide, but failed to hydrolyze urea, liquefy gelatin or produce indol.

The organisms agglutinated to titre in *S. tel-aviv* O serum (XXVIII), and in absorption tests removed all O agglutinins from the serum. Phase 1 of the culture agglutinated *S. rubislaw* (r, phase 1) serum, and removed most of the agglutinins from the serum with the agglutinin absorption procedure. Phase 2 of the culture agglutinated several sera in high dilutions. Sera 1, 2, 1,5, 1,6, and 1,7 were agglutinated, but when single factor sera were employed agglutination occurred only with the 5 serum. Serum derived from *S. cholerae-suis* (1,5, phase 2), was completely absorbed of flagellar agglutinins by the culture.

Cultures of the organism were submitted to Dr. P. R. Edwards, Communicable Disease Center, who confirmed our belief that it was a new type and suggested that it be designated as *S. chicago*. Although extensive surveys for enteric pathogens have been carried out at Chicago State Hospital for many years, this *Salmonella* type has not been isolated at any time.

SUMMARY

A new *Salmonella* type, var. *chicago*, with the antigenic formula XXVIII: r-1,5, has been described. It was isolated from the feces of an asymptomatic food handler whose history failed to reveal any signs or symptoms of gastro-enteritis.

ACKNOWLEDGMENTS

The authors desire to express their appreciation to Mr. Macaluso for procuring additional specimens and information from the food handler.

Grateful acknowledgment is also made to Dr. P. R. Edwards, Communicable Disease Center, for confirmation of the serologic work and suggesting the type designation.

Canadian Journal of Public Health

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THE FORTIETH ANNUAL MEETING

ASSOCIATIONS may show signs of age, but there was nothing in the fortyith annual meeting, held in Winnipeg last month, to indicate that the Association is showing any lessening of vitality or enthusiasm. On the contrary, the Association recorded further developments of provincially organized public health associations as branches of the national organization. It was fitting that the inaugural sessions of the Manitoba Public Health Association should be held during this general meeting of the Association. For a number of years the value of provincial associations which would make possible the holding of annual meetings in practically all the Provinces has been appreciated. There now remains the organization of provincial associations in only two Provinces. In both of these, steps have been taken and it is hoped that within a year or two the organization will be completed.

Under the presidency of Dr. Morley R. Elliott, Deputy Minister of Health and Public Welfare of Manitoba, and with the assistance of a local committee whose achievements might well be a model for future years, the program and arrangements were admirably planned and carried out. The attendance reached four hundred. The convention had the warm support of the Hon. Ivan Schultz, Minister of Health and Public Welfare, on behalf of the Province, and the Mayor and members of the Council of the City of Winnipeg, making possible a meeting which will be long remembered and which was one of the most successful in the Association's history.

The participation of Dr. Gaylord W. Anderson, President of the American Public Health Association, Dr. W. Palmer Dearing, Assistant Surgeon General of the United States Public Health Service, Miss Ann S. Nyquist, Director of Public Health Nursing for the State of Minnesota, and Dr. Allen O. Gruebel, Secretary of the Council on Dental Health, American Dental Association, contributed much to the program. The presence of the members of the Public Health Mission from India and Pakistan was a reminder that interest in public health is international. The members included: Lieut.-Col. T. C. Puri, Deputy Director of Health Services, New Delhi; Dr. B. C. Das Gupta, Director of Health

Services, West Bengal, Calcutta; Dr. A. N. Das, Director of Health Services, Uttar Pradesh, Lucknow; Dr. B. B. Dikshit, Surgeon-General to the Government of Bombay; Dr. K. S. Viswanathan, Director of Public Health, Madras; and, from Pakistan, Colonel S. W. H. Mallick, Director of Health Services, Punjab.

At the time of the annual meeting the sessions of the Executive Council, the governing body of the Association, are held. Representatives of the provincial associations and members at large who constitute the Council, dealt with reports of various committees and made plans for the extension of the Association's program. The Committee on Social Security was directed to obtain the views of the members about the statement published by the Association in 1943 concerning the provision of health insurance on a national basis. The Committee will develop plans designed to permit public health to make the maximum contribution to the health and welfare of the people of Canada.

Two senior members were honoured with life membership at the dinner session: Miss Elizabeth Anne Russell, Director of the Public Health Nursing Service in the Manitoba Department of Health and Public Welfare, and Dr. Malcolm R. Bow, Deputy Minister of Health for the Province of Alberta. The presentations were made by Dr. Adélard Groulx, Director of the Department of Health of Montreal. Dr. Groulx recalled that Miss Russell had established in 1917 the first provincially organized public health nursing service in the world and that she has brought great credit to Manitoba and to Canada. Speaking of the years of service and the importance of Dr. Bow's contribution to public health in Canada, Dr. Groulx recounted Dr. Bow's work in Regina as medical officer of health and his leadership in Alberta as executive health officer for the Province for the past twenty-five years. Dr. Bow is held in high esteem by public health leaders on this continent. As a complete surprise to him, Dr. Walter L. Bierring, State Commissioner of Health of Iowa, and Dr. A. J. Chesley, State Health Officer for Minnesota, were present, having been delegated by the Conference of State and Provincial Health Authorities of North America to confer on him life membership in that organization. The honouring of these two distinguished leaders was a highlight of the fortieth meeting.

In arranging the program, the local committee undertook to show to the members and their friends some of the natural attractions of the City of Winnipeg. One afternoon was devoted to a trip to Lower Fort Garry, a delightful historic spot on the Red River, and on another day the members were guests of the City at a luncheon in the pavilion of Winnipeg's beautiful Assiniboine Park.

The Winnipeg meeting of 1952 combined an excellent scientific program with most generous hospitality. Again we express our thanks to Doctor Elliott and all the members of his committee for an outstanding meeting.

The Canadian Public Health Association

1951-1952

PART II

RESOLUTIONS ADOPTED AT THE FORTIETH ANNUAL MEETING, HELD IN WINNIPEG, JUNE 16-18, 1952

THE CANADIAN PUBLIC HEALTH ASSOCIATION, on the occasion of each annual meeting, expresses its views and recommendations in the form of resolutions. At the fortieth annual meeting, held in Winnipeg in June, the committee reviewed a series of resolutions and presented them to the Association for consideration and action. The following resolutions were approved:

BE IT RESOLVED:

That the Association forward to all members of the Parliament of Canada and to members of the Senate the following statement concerning the value of the national health grants as part of the Federal health program:

The Canadian Public Health Association, representing physicians serving as medical officers of health, clinical specialists and others serving in public health programs, dentists, engineers, veterinarians, nurses, sanitary inspectors, and others, for many years urged the consideration of a policy of assistance in public health. It was realized during World War II that such a plan had to be deferred until the close of the conflict. Announcement by the Prime Minister in 1948 of the development of a broad program in public health, designed to improve the health and promote the welfare of the people of Canada, was welcomed by this Association as a great advance in health promotion.

The first five years of the provision of national health grants will be completed in May, 1953. As was anticipated, the utilization of these grants has required time. In the first year, about one-quarter of the funds available were expended. This year 80 per cent of the funds will be employed. The effect of the health grants is evident in every province. By next May the objective of 42,000 new hospital beds will be met, through beds now in use, under construction, or planned. A survey of the needs for the next five years indicates that approximately 60,000 new beds will be required. It is gratifying that additional beds in tuberculosis sanatoria will be scarcely required, since the preventive and control program in tuberculosis throughout Canada has been so effective that few if any additional beds are needed.

Such a statement cannot be made, however, in regard to the care of the mentally ill. Substantial advances have been made through the assistance of

Reports presented at the fortieth annual meeting of the Canadian Public Health Association, held in the Fort Garry Hotel, Winnipeg, June 16-18, 1952.

the health grants in the mental health program and in hospital construction. When it is realized that improved methods of treatment of the mentally ill will permit approximately half of the patients to leave the institutions within a year, the importance of increasing these facilities is appreciated. At the same time the expenditure of funds for programs designed to prevent mental illness through the extension of mental health clinics is recognized as a practical and effective approach to the problem of mental illness.

In all, ten fields of public health are receiving Federal Government assistance made through the Provincial Governments. In each of these fields the achievements of the past four years are such that this Association is convinced that the expenditures now being made are investments in the health and welfare of the people of Canada which will continue to pay returns of great economic importance and will earn the appreciation of tens of thousands of citizens who have been aided by the services provided.

The Canadian Public Health Association represents no vested interests. For forty years it has given leadership, which has included programs for the control of tuberculosis, venereal diseases, diphtheria and other great causes of disability and death. At the fortieth annual meeting, held in the City of Winnipeg June 16-18, 1952, under the presidency of Dr. M. R. Elliott, Deputy Minister of Health for the Province of Manitoba, the Association unanimously endorsed this statement and expressed the desire that it should be placed in the hands of all members of Parliament in order that these views, which are the views of the public health leaders of Canada, might be known. It is the Association's earnest hope that the important contribution being made by the Federal health grants may be known and appreciated, and that Canada may continue to receive the benefits of this policy of health grants.

BE IT RESOLVED:

That the Association request the Federal Department of Health and Welfare to consider amending the regulations under which federal health grants are distributed, to permit the use of a portion of this money to assist in building local health centres, even though these centres be designated primarily for preventive services.

WHEREAS it is now known that the causative agent of poliomyelitis is present in sewage during the months when the disease is prevalent,

AND WHEREAS many municipalities are using water supplies which are endangered by sewage pollution,

AND WHEREAS in rural areas the condition of many privies and outdoor toilets is unsatisfactory,

AND WHEREAS bathing beaches and wading pools may be contaminated by sewage,

BE IT RESOLVED:

That this Association draw the attention of the newspapers of Canada and the municipal authorities to the necessity for the provision of adequate methods of sewage treatment in municipal plans; for an intensive effort to improve methods of disposal of excreta in rural areas; and for efforts to prevent the use of contaminated areas for bathing. Also, in view of the fact that the virus has been demonstrated in the stools of healthy carriers, that our citizens generally be instructed regarding the need for a meticulous personal hygiene.

WHEREAS dental caries continues to be an almost universal disease, affecting the health of the nation,

AND WHEREAS a convincing amount of evidence has accumulated indicating the marked value of fluoridation of water supplies in reducing dental caries in children,

AND WHEREAS there is considerable evidence that the dental protection so acquired in early life is carried over, in good measure, into adult years.

AND WHEREAS no detrimental effect has been demonstrable in those populations which have been using properly fluoridated water for seven years and longer,

BE IT RESOLVED:

That the Canadian Public Health Association recommends the fluoridation of community water supplies for the reduction of dental caries in those communities where there is at present an insufficient fluoride content for this purpose, and where the procedure can be adequately controlled and supervised.

WHEREAS The Rockefeller Foundation, through its Division of Medicine and Public Health, has continued its interest in the developments in these fields in Canada,

BE IT RESOLVED:

That the Association express appreciation of the services being rendered by Dr. Bruce Wilson as representative of this division of the Foundation in Canada, in consulting with departments of health and assisting in many ways in the development of public health programs.

THE ASSOCIATION records with deep appreciation its indebtedness to the Honourable Ivan Schultz, Minister of Health and Public Welfare of the Province of Manitoba, for his department's most generous contributions to the success of this, the fortieth annual meeting.

THE ASSOCIATION gratefully acknowledges the generous hospitality of the administrative officers of the City of Winnipeg, in particular His Worship Garnet Coulter, Mayor of the City, who have done so much to make the meeting a memorable one.

THE ASSOCIATION desires to express its appreciation of the outstanding work of the local organization committee, under the chairmanship of Dr. M. R. Elliott, in the planning and conduct of this year's meeting.

G. M. LITTLE, *Chairman*; C. F. W. HAMES,
H. M. MALCOLMSON, EDNA L. MOORE, and
A. H. SELLERS

RESOLUTIONS OF THE PUBLIC HEALTH NURSING SECTION

WHEREAS the provision of training facilities for leaders in Civil Defence nursing is resulting in the preparation of nurses throughout Canada to participate in any emergency,

AND WHEREAS health training grants for nurses continue to make available to the health services of Canada increased numbers of qualified personnel,

BE IT RESOLVED:

That the members of the Public Health Nursing Section, Canadian Public Health Association, express appreciation to the Honourable the Minister of

National Health and Welfare, and assure him of their continued efforts in the promotion of health.

WHEREAS the Canadian University Schools of Nursing are providing the facilities to prepare nurses for public health and other fields of nursing,

AND WHEREAS the existing facilities are inadequate to meet the increasing demands for qualified personnel required to staff expanding health and hospital services,

BE IT RESOLVED:

That the Canadian Public Health Association request the Honourable the Minister of National Health and Welfare to give consideration to the needs of these schools for financial assistance in extending and enriching the courses now offered, and in developing new programs in keeping with current advances in nursing education and practice.

RESOLUTIONS OF THE VITAL AND HEALTH STATISTICS SECTION

WHEREAS no Canadian data on mortality by occupation or occupational group are now available,

AND WHEREAS such data would be useful in many fields of public health,

BE IT RESOLVED that this Section again urge the Dominion Bureau of Statistics to consider ways and means by which mortality data by occupation and economic group may be made available, decennially, for study and assessment.

WHEREAS the Expert Committee on Health Statistics of the World Health Organization has framed definitions of foetal death (stillbirth) and live birth which it has recommended for international adoption,

AND WHEREAS the proposed definitions differ in no essential details from definitions even now used in certain provinces of Canada as well as in Great Britain and the United States,

AND WHEREAS research into the causes and prevention of foetal death requires knowledge of the large number of such deaths which occur prior to the 28th week of gestation,

BE IT RESOLVED that the Vital and Health Statistics Section of the Canadian Public Health Association recommend the adoption in Canada of uniform definitions of live birth and foetal death (stillbirth) which incorporate the basic principles in the definitions proposed by the Expert Committee of WHO;

BE IT RESOLVED FURTHER that this Section recommend the extension of the requirement for the registration of foetal deaths (stillbirths) from 28 weeks' gestation as at present, to 20 weeks' gestation and that such period be the minimum incorporated in the national definition of foetal death.

WHEREAS the infant mortality rate in Canada can be further substantially reduced,

AND WHEREAS such further reduction requires that attention be focussed on deaths among infants in the first month of life and especially on the mortality among infants prematurely born,

BE IT RESOLVED that this Section recommend to the Dominion Bureau of Statistics the publication annually of statistics on the numbers of infants prematurely born and the number of deaths (by cause) among such infants.

WHEREAS this Section recognizes the high calibre of the papers presented at its sessions this year and their wider interest to public health workers throughout Canada,

BE IT RESOLVED that the Section seek early publication of these papers in the Journal of the Association;

BE IT RESOLVED FURTHER that the Section urge the Editorial Committee of the Journal to consider the publication of a special issue of the Journal to be devoted to the Symposium on Public Health Aspects of an Ageing Population.

WHEREAS this Section is extremely fortunate in its choice of a continuing secretary,

AND WHEREAS the success of this meeting has been due in no small measure to his efforts,

BE IT RESOLVED that this Section record its appreciation of the work of Mr. H. G. Page for the fine contribution which he continues to make to the progressive development of the Vital and Health Statistics Section of this Association.

A. H. SELLERS, M.D., *Chairman*

REPORT OF THE COMMITTEE ON NOMINATIONS

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 Association

AD. GROULX, *Chairman*; C. R. DONOVAN,
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REPORT OF THE COMMITTEE ON PROFESSIONAL EDUCATION

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 Dr. R. G. Struthers, Toronto
 Dr. V. C. R. Walker, Toronto

IN THE REPORT OF THE COMMITTEE presented at the Montreal meeting in May of last year, reference was made to studies being conducted by several committees in connection with the establishing of qualifications and the defining of responsibilities. A committee of the Public Health Nursing Section has been developing its study. The committee on the qualifications of public health veterinarians and the committee on the qualifications of public health statisticians are also engaged in surveying the field and consulting with various members. There has, therefore, been no occasion to bring the Committee on Professional Education together during the year. It is expected that the reports of these three committees will be available shortly for publication in the JOURNAL as tentative reports, for consideration and study by the members for a period of eight months. They will be brought forward for adoption at next year's annual meeting. Miss Edna L. Moore is serving as

liaison member of the committee on public health nursing, Dr. G. A. Edge and Dr. V. C. R. Walker as liaison members of the committee on public health veterinarians, and Dr. A. H. Sellers as liaison member of the committee on public health statisticians. During the coming months, work will be undertaken on the preparation of a statement of qualifications of public health educators. Miss Margaret E. Nix has agreed to serve as liaison member of this committee.

The recommendations made by the Committee on Professional Education concerning the qualifications and training of sanitary inspectors, presented at last year's annual meeting, have received general approval. No change was made in the educational requirement for registration, which continues to be junior matriculation or its equivalent. The period of training was extended to nine months. During this time the candidate either attends a formal course of instruction occupying from three to four months or takes the correspondence course conducted by the Association. There has been complete approval of the extension of the training period, both by health departments and by members of the Canadian Institute of Sanitary Inspectors. The provincial departments of health have endorsed the report and are assisting in the implementation of its recommendations. The correspondence course provided by the Committee on the Certification of Sanitary Inspectors has been extensively revised for the current session.

Two formal courses of instruction for sanitary inspectors have been made available during the past year. In the School of Hygiene at the University of Montreal, a course in sanitary inspection occupying a period of five months has been provided. There a group of sanitary inspectors, largely working in the Province of Quebec, have had the benefit of this formal training. This course constitutes an important contribution to the training of sanitary inspectors in Canada. In the Province of Manitoba, the Provincial Department of Health and Public Welfare has arranged a course extending over ten months in which didactic instruction and field work are combined. The work was planned and conducted by Mr. M. Flattery, senior sanitary inspector of the Department, with the co-operation and assistance of other members of the Department. The course has been eminently successful. Plans are being advanced for the introduction of a course in Ontario. In the provision of these courses the limited number of candidates constitutes a major problem. An adequate course extending over four or five months is costly to provide, particularly in so far as instructors are concerned.

In October the chairman of the Committee on Professional Education met with representatives of the British Columbia branch of the Canadian Institute of Sanitary Inspectors in Vancouver, and with representatives of the Alberta branch in Edmonton. It was possible to clarify the report of the committee dealing with the extension of the training period and to remove misunderstandings about the conduct of the examinations. Sanitary inspectors throughout Canada are aware of the work of the Canadian Public Health Association and of the purpose of the Committee on Professional Education in endeavouring to improve training facilities.

The Committee on Professional Education has on several occasions given

consideration to the introduction of the objective type of examination instead of the essay type. The American Public Health Association, through its Committee on Professional Education, has given leadership in the subject of examinations. With the establishing of the Merit System basis of appointments in public health by State and municipal authorities, the need was at once evident for a system of examinations which would be fair to the candidates, adequate in scope, and effective in selecting the most suitable candidates for the positions to be filled. Before the introduction of the Merit System the situation was unsatisfactory. Examination papers were sometimes hastily set by the employing authority, injustices resulted, and there was failure to obtain properly trained persons. As a result of studies made by the committee of the American Public Health Association, an organization for the setting of examination papers in public health and in medicine and related fields has been built up. For the development of this Professional Examination Service, as it is now called, great credit is due Dr. Lillian D. Long, director of the service, and Dr. Reginald M. Atwater, executive secretary of the Association, and their colleagues. The Professional Examination Service is now well established. State Departments of Health pay an annual fee which entitles them to examination services during the year. At present, 30 States, 1 territory, and 8 cities, counties, and separate crippled children's commissions are members of the Annual Service Plan.

Our committee has as yet made no recommendation about the use in Canada of the objective type of examination, but it is continuing to give consideration to this important subject. Its value as an effective means of determining the candidate's knowledge is recognized. If this objective type of examination were arranged for sanitary inspectors, for example, questions about the organization of public health in Canada would have to be prepared. The examination would be supplemented by an oral examination and by a field inspection report.

REPORT OF THE SUB-COMMITTEE ON RECOMMENDED QUALIFICATION REQUIREMENTS AND MINIMUM SALARIES FOR PUBLIC HEALTH PERSONNEL IN CANADA

(Committee on Professional Education)

J. H. Baillie, M.D., D.P.H., Chairman

William Mosley, M.D., D.P.H., Secretary

- AT THE ANNUAL MEETING of the Canadian Public Health Association held in Montreal, last May, the Committee on Salaries and Qualifications of Public Health Personnel was requested to revise its 1948 report.

During 1951 information regarding any salary or qualification changes that had been instituted since 1948 was gathered from 10 Provincial Health Departments, 149 Health Units, 23 City Health Departments, and the Department of National Health and Welfare. This material was tabulated and used as the basis for recommendation of salaries that are considered to be the minimum that should be used for the particular position or grade anywhere in Canada. (Areas or Provinces that have a generally higher economic status should make an upward adjustment of these suggested minima.)

The revised report was considered and adopted by the Association's Execu-

tive Committee at a meeting held in Toronto on Saturday, October 20, 1951. The report was published in the February issue of the Canadian Journal of Public Health and reprinted for distribution among the agencies that participated in the survey. The recommendations have been generally accepted and have been helpful in bringing salaries of public health workers to a more satisfactory level in many areas.

The recruitment and maintenance of an efficient, qualified professional and technical staff is the major problem facing official health agencies today. While there has been an increase in the number of personnel employed by health agencies in Canada since 1948, there has also been an attempted extension of health services to a considerable number of communities. These new agencies have made the over-all shortage of trained public health personnel more acute and the apparent gain in total personnel is not as encouraging as it appears at first glance; most agencies are still under-staffed to a critical degree.

While in most cases there was an over-all increase in the salaries paid in 1951 in comparison with those in 1948, the increases were not comparable with those received by other workers in Canada and did not compensate for the increased cost of living generally.

In nearly all groups the initial minimum salary is inadequate and it has become increasingly apparent that the salary range of most positions is a major deterrent to professional people who contemplate public service. This small salary range, with increments usually confined to a period of a few years, not only affects recruitment but makes it very difficult to retain competent workers. Public health cannot compete successfully with other professional fields in Canada or the United States. For people already engaged in the practice of public health, there is little or no monetary incentive to advancement; this is one of the main reasons why so many well-trained workers have left public health during the past few years.

The standards of service, the initial training requirements, the postgraduate requirements and the in-service training standards have been raised and maintained at a higher level during the past decade. These steps were taken by the public health workers themselves in an effort to improve the quality of both the service and the type of person giving the service to the public. It is extremely difficult to maintain improvement and advancement in face of the attitude that the public health worker is apparently worth no more to the agency after twenty years of service than he is after three or five years.

REPORT OF THE COMMITTEE ON THE CERTIFICATION OF SANITARY INSPECTORS

A. E. Berry, M.A.Sc., C.E., Ph.D., Toronto
Chairman

R. Bowering, M.A.Sc., Victoria	F. L. Lunn, C.S.I.(C.), Brampton, Ont.
O. H. Curtis, M.D., D.P.H., Charlottetown	D. J. Mackenzie, M.D., Halifax
R. D. Defries, M.D., D.P.H., Toronto	J. A. Melanson, M.D., D.P.H., Fredericton
C. R. Donovan, M.D., D.P.H., Winnipeg	William Mosley, M.D., D.P.H., Toronto
P. O'D. Gallagher, M.D., D.P.H., St. John's	L. A. Pequegnat, M.B., D.P.H., Toronto
S. W. George, C.S.I.(C.), Vancouver	J. G. Schaeffer, M.A.Sc., Regina

Jules Gilbert, M.D., D.P.H., Montreal
J. M. Homer, C.S.I.(C.), Hamilton
T. J. Lafreniere, C.E., Montreal

D. R. Stanley, M.A.Sc., Edmonton
Mr. R. L. Randall, Toronto, *Secretary*

CENTRAL BOARD OF REGISTRATION AND EXAMINATION

Dr. A. E. Berry, Chairman

Dr. R. D. Defries
Dr. Jules Gilbert
Mr. J. M. Homer
Mr. T. J. Lafreniere

Mr. F. L. Lunn
Dr. Wm. Mosley
Dr. L. A. Pequenat
Mr. R. L. Randall, Toronto, *Secretary*

THE RECOMMENDATIONS made last year by the Committee on Professional Education and adopted at the 1951 meeting of the Executive Council are being implemented.

Effective with the 1952 examinations, candidates who have not been employed as sanitary inspectors for at least one year are required to obtain nine months of full-time field training under the supervision of a department of health. During this period they take the correspondence course in sanitary inspection conducted by the Association. Candidates who are able to attend formal courses of instruction, such as that offered in the School of Hygiene, University of Montreal, and in the School of Instruction for Sanitary Inspectors conducted by the Manitoba Department of Health and Public Welfare, are granted exemption from the correspondence course, and the period of nine months of field work is decreased by the time spent at the formal course.

On the basis of being able to devote nine months to preparation for the examinations, twenty-nine candidates have qualified for registration and are enrolled in the current session of the correspondence course. Four (all Navy personnel) are resident in British Columbia, two in Alberta, five in Saskatchewan, fifteen in Ontario, one in Nova Scotia, and two in Prince Edward Island. All but one are on the staffs of health departments, either as sanitary inspectors or as student sanitary inspectors.

When the requirement of nine months of field work was first considered, it was hoped that training bursaries would be available in all the provinces through utilization of the Professional Training Grant of the National Health Grants. In the provinces where bursaries are not available for training in sanitary inspection, apart from attendance at formal courses of instruction, candidates must take the field work at their own expense unless a health department will employ them as student sanitary inspectors while they are given field training. Until training bursaries are generally available, or additional formal courses are provided to supplement those given by the School of Hygiene, University of Montreal, and the Manitoba Department of Health and Public Welfare, the number of candidates entering the field of sanitary inspection will be limited to those who are chosen for specific positions and trained on the job by the department or unit concerned.

The 1952 examinations will be held on November 26, 27 and 28. Although the examinations are usually held during the month of September, a later date has been chosen this year in order that candidates may have time to complete nine months of field work. It is tentatively planned to hold examinations twice a year, in the spring and late fall. The 1953 examinations will probably be

held on June 24, 25 and 26. The 1952-53 session of the correspondence course is tentatively scheduled to open in October.

For the current session, the correspondence course has been extensively revised. The changes which have been made will make the course more effective and of greater value to the candidates in their preparation for the examinations and in their subsequent duties. The schedule of the current session is as follows:

Part 1: Public Health Organization, Communicable Diseases, and Vital Statistics: March 17-May 5.

Part 2: Food Sanitation: May 26-July 14.

Part 3: Environmental Sanitation: September 8-October 27.

The 1951 examinations were held on September 12, 13 and 14 in eight provincial centres: Vancouver, Edmonton, Regina, Winnipeg, Toronto, Montreal, Halifax, and (for the first time) St. John's. Of the 53 candidates, 45 were successful in the five subjects and qualified for the Certificate in Sanitary Inspection (Canada); 7 were conditioned in one subject, which they may repeat at a subsequent examination; and 1 failed, being below the pass mark of 50 in two or more subjects.

In March 1952, a special examination was held in Winnipeg for a group of eleven students who were completing a ten-month course in sanitary inspection conducted at the School of Instruction for Sanitary Inspectors sponsored by the Department of Health and Public Welfare of Manitoba, under the direction of Mr. Mark Flattery, C.S.I.(C.), senior sanitary inspector for the Province. All the candidates were successful and are now serving with various health units in Manitoba. In March also an oral examination was held in Montreal for a group of six students who were completing the course in sanitary inspection given at the School of Hygiene of the University of Montreal. Candidates who are successful in this university course, which occupies a period of five months, are granted exemption from the field inspection report and the three written papers of the Association's examination and are granted the Certificate in Sanitary Inspection (Canada) if they pass an oral examination conducted by the Association's provincial examining board.

All examinations are under the direction of the Provincial Departments of Health, which name the chairmen of the provincial boards. They are conducted with the co-operation of the Canadian Institute of Sanitary Inspectors, which appoints a representative to each board.

Since the inception of the examinations in 1935, eight hundred and four inspectors have qualified for the Certificate in Sanitary Inspection (Canada). Statistically, and in terms of the service given by these inspectors, this is a contribution to the advancement of public health in Canada of which the Association may well be proud.

REPORT OF THE COMMITTEE ON RECRUITMENT

William Mosley, M.D., D.P.H., Chairman

G. H. M. Hatcher, M.D., D.P.H., Secretary

ONE OF THE SERVICES provided by the Canadian Public Health Association

to the Provincial Departments of Health, the Federal Department of Health, and local health authorities is the recruitment of personnel. The needs in Canada for trained health personnel can be met only by long-term planning. It is quite impossible to obtain trained public health nurses without plans to interest high-school girls in careers in public health nursing, as well as interesting others during the period of their nursing education. In each field of public health, trained personnel can be obtained only by well-designed programs which provide specific information about careers in public health.

As part of its services, the Association provides, through the *JOURNAL*, an employment service for health agencies and public health personnel. Through its Sections, the Association has the best advice about the most effective steps in recruitment. These vary from year to year but, in general, dependence must be placed on sound educational programs directed to individuals in special fields during their university or other courses of training.

During the past year the committee revised the booklet for physicians, entitled "Public Health as a Career." Copies of this have been made available to the graduating classes in medicine in all the Canadian universities. The inclusion in this year's edition of the requirements for certification as a specialist in public health, and the recommendations of the Association concerning minimum salaries for various types of position, will help medical students to obtain a reasonably complete picture of public health work and the opportunities for physicians.

Other work of the Association has an important bearing on recruitment. The Committee on Professional Education, in establishing qualifications and standards for trained workers, is closely related to the recruitment program. The recommendations of the Committee on Qualifications and Salaries of Public Health Personnel are important to the success of the recruitment program.

The shortage of medical officers of health has not been as acute as had been anticipated, due to the availability of physicians with training in public health who have come to Canada from Great Britain. The needs of several of the Western Provinces have been met in part by the appointment of these physicians. It is appreciated, however, that helpful as the services of these physicians are in meeting the need, the enlistment of physicians who are fully familiar with conditions in the province is most desirable, as the interrelationship of the public health officer and the practising physician is very important in the carrying out of local health services. The prospect for the coming year is not encouraging in so far as adequate numbers of physicians and public health nurses are concerned. There is an urgent need also for sanitary engineers.

The Committee on Recruitment cannot present statistical records of its achievements. Its work, nevertheless, is producing results which your committee believes will be increasingly evident.

REPORT OF THE COMMITTEE ON SOCIAL SECURITY

G. W. O. Moss, M.D., D.P.H., Secretary

DURING THE YEAR the Executive Committee approved the reorganization of the Committee on Social Security. In May 1943 the Association presented a

brief to the Special Committee on Social Security of the House of Commons, in which the Association expressed its views concerning the provision of a plan for health insurance on a national basis. Since that time the Executive Committee has given consideration to the subject. It is felt that an intensive study should be made during the coming year in order that the present views of the Association may be determined and reflected in recommendations which it is hoped will be presented at next year's annual meeting of the Association.

A committee representative of all the provinces and groups concerned with the provision of health insurance and other measures of social security is now being formed.

REPORT OF THE LABORATORY SECTION

F. O. Wishart, M.A., M.D., D.P.H.
Secretary

THE NINETEENTH ANNUAL MEETING of the Laboratory Section of the Canadian Public Health Association was held in Toronto at the Royal York Hotel on December 17 and 18, 1951. Interest in the meeting was very encouraging, with approximately one hundred persons registered and a capacity attendance at the dinner. Representatives were present from most of the provinces, from federal laboratories, many of the universities, and from the United States. The scientific sessions covered a wide range of interests and stimulated much discussion. The illustrated address at the dinner session, "Bacteriological Safety Devices", by Dr. A. G. Wedum, Chief of the Safety Division, Chemical Corps Biological Laboratories, Camp Detrick, Frederick, Maryland, was an outstanding contribution. The paper by Dr. Robert A. Nelson, Jr., of the Naval Medical Research Institute, Bethesda, Maryland, deserves mention. His account of the *Treponema pallidum* immobilization test as a promising means of increasing the specificity of the serology of syphilis, created great interest. As part of the program, a visit was made by many of the members to the new quarters of the Division of Laboratories of the Provincial Department of Health. Conducted tours were arranged through the courtesy of Dr. E. Elkerton, Director, and the visitors were greeted at tea by the Minister of Health, the Hon. Mackinnon Phillips, M.D.

The business session was devoted to a report of the standing committee on salary problems relating to laboratory personnel. The members of the committee are M. H. McCrady (chairman), E. G. D. Murray, James Gibbard, Hugh Starkey, and E. L. Barton. The report, presented by Dr. Murray in the absence of the chairman, reviewed the previous work of the committee, the method of procedure by questionnaire to provincial, federal and representative municipal laboratories, and the suggestions submitted to the parent committee of the Canadian Public Health Association. This report created active discussion of the problems of training of technicians, recruitment of personnel and various matters concerning salaries of the different grades, both technical and professional. The report was adopted after a few modifications and was referred to the parent committee for incorporation in the salary survey which has since been published. The main points raised by the various speakers were that (1) the committee should give continuing study to the problem of training

technicians by comparing programs already in existence, such as those of the Ryerson Institute, the University of Montreal, the Canadian Medical Association, and attempt to arrive at some uniform policy which would cover not only bacteriology but biochemistry and the other needs of diagnostic laboratories; (2) salaries paid technical grades should be sufficient to attract men in order to reduce the staff turnover and the salaries in higher grades should be such as to make a technical career attractive; (3) persons taking post-graduate training for professional careers should be paid a salary sufficient for reasonable maintenance; (4) since it is necessary to pay much higher salaries than before in order to secure junior professional recruits, salaries for higher ranks should be increased in order to maintain a reasonable differential in keeping with length of service. Adoption of the report was moved, with the reservation that for the higher professional ranks increases suggested should take into account income-tax deductions and net value of salaries. This motion was seconded and passed. The cordial thanks of the Section were expressed to Mr. McCrady and his committee for their work.

A committee on nominations was elected as follows: E. G. D. Murray, James Gibbard, Hugh Starkey, and D. T. Fraser.

The new Executive Committee and Council suggested by the nominations committee and announced at the dinner session are as follows: Chairman, J. Edouard Morin; Vice-chairman, T. E. Roy; Secretary, F. O. Wishart; Council, R. G. E. Murray, A. R. Foley, M. Saint-Martin, E. G. D. Murray, J. Gibbard, and A. L. MacNabb; representative to Council of the Canadian Society of Microbiologists, F. O. Wishart. This report was approved unanimously by the members.

The place of meeting for 1952 was discussed and set tentatively as Quebec City.

REPORT OF THE VITAL AND HEALTH STATISTICS SECTION

H. G. Page, M.A., M.P.H., Secretary

THE SECTION HELD its 1951 meeting in Montreal in conjunction with the annual convention of the Association.

In compliance with a resolution passed at the 1950 annual meeting, the scope of the Section's activities was broadened to include the general field of public health statistics and the name accordingly was changed from "Vital Statistics Section" to the "Vital and Health Statistics Section."

The program of the 1951 meeting reflected this broadened interest in that several papers relating to the field of industrial, mental and hospital morbidity and administration were presented in addition to topics pertaining to vital statistics.

The structure and membership of the various committees of the Section were reviewed. As the subject matter of some of the committees has come under the scope of various official governmental agencies and committees in recent years, a review of the terms of reference of some committees was considered desirable. The matter is under continuing review.

In view of the limited but widespread membership of the Section, the question of place of meetings of the Section has been an annual subject of

controversy. Recent consensus is that the Section should make it a rule to meet each year with the parent association if at all possible, or at least every second or third year, and that meetings be held separate from the parent body only if considered expedient. The Section Council considers that the holding of meetings with the parent body will have the effect of providing an opportunity to local vital and health statistical personnel to attend and take part in Association activities, and will stimulate local interest in the Section and thereby encourage increased membership.

As evidence of the widespread interest of the Section, all papers presented at the 1951 meeting of the Section have been published in the *CANADIAN JOURNAL OF PUBLIC HEALTH*. The resolution adopted at that meeting, pertaining to the computation of adjustment factors to bridge the gap between the 5th and 6th Revisions of the International Lists of Causes of Death, has been referred to the appropriate official agencies responsible for preparing mortality statistics. The Section adopted a further resolution recommending more intensive statistical studies in the field of mental and chronic illness.

The topics selected for discussion at the 1952 meeting are a further illustration of the extended scope and interest of the Section. Among other papers to be presented at this Winnipeg meeting, a symposium is being held on administrative problems related to the provincial Sickness Surveys and the public health aspects of an ageing population. The objective of the latter is to highlight the background leading to chronic illness and some of the major problems associated with an ageing population.

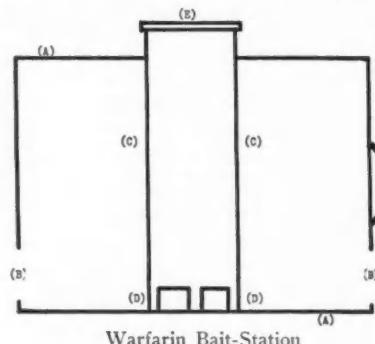
WARFARIN BAIT-STATIONS FOR USE ON DUMPS

FOR SOME YEARS it has been the policy of the Town of Brampton (population 9,000) to attempt control of the rat population at the town dump by the periodic use of rat poison. Since the formation of the Peel County Health Unit in July 1946, rodenticides have been purchased by the town and applied under the direction of the sanitary inspectors of the Health Unit.

In March of this year, at the request of the Health Unit, the town agreed to use the new raticide, Warfarin. The rat bait, ready-mixed with ground corn meal (Warfarin 0.025%), was obtained from Howard Chemicals, Toronto. Inasmuch as comparatively large quantities of bait at numerous feeding stations are required with this poison, the first problem was the design of a suitable feeding station. Such a station should protect the bait from the weather, hold a fair storage for self-feeding and, further, not be attractive to the curious people who visit or scavenge a dump. After several trials, a bait-station, shown in semi-diagrammatic cross-section, was designed by Mr. F. L. Lunn, C.S.I.(C.), senior sanitary inspector of the Health Unit.

The station is made from a square 5-gallon container (A), as used for commercial liquids or powders and usually available on dumps. The container is first cleaned or burnt out. Entrances (B) 3" square are cut at each end. A circular opening 6" in diameter is cut in the middle of one side. A 6" stove pipe (C) with three "legs" (D)—made by cutting several pieces 2" wide from one end of the pipe—is fitted into the side hole. A galvanized lid (E) fits the open end of the stove

pipe. The stove pipe is filled with bait and acts as a self-feeding station, holding about five pounds of bait. The total cost of eight such stations manufactured by a local tinsmith from materials found on the dump was \$4.00.



Excellent results were obtained from the use of Warfarin in the bait stations described. The total consumption of bait in the first ten days was 250 pounds and the total dead rat count 245. The previous highest kill with other rodenticides over any baiting period was 57. Furthermore, in contrast to other rodenticides previously used, there was no apparent bait refusal.

After the initial ten-day observation period, eight burrows were explored and an average of four dead rats per burrow were found. This would indicate that the actual rat kill was far in excess of the quoted figure of 245.

—Donald G. H. MacDonald, M.D., D.P.H., Director, Peel County Health Unit, Brampton, Ontario.

THE RELATIONSHIP BETWEEN INOCULATIONS AND POLIOMYELITIS

A STATEMENT ISSUED BY THE FEDERAL SECURITY AGENCY,
UNITED STATES PUBLIC HEALTH SERVICE

BECAUSE of widespread discussion and public alarm last year concerning the possible relationship between various types of inoculations and poliomyelitis, the State and Territorial Health Officers Association asked the Public Health Service, Federal Security Agency, to sponsor a study of the question and issue a clarifying statement. Subsequently, the Public Health Service, on March 14, 1952, sponsored a meeting of 41 poliomyelitis investigators, epidemiologists, pediatricians, allergists and health officers. The National Foundation for Infantile Paralysis helped plan and participated in the conference.

The conference voted unanimously in favor of the conclusions contained in the following statement which has been accepted by the Public Health Service and transmitted to official health agencies, to the medical profession and to the general public.

There is no definite evidence that an increase in the number of cases of poliomyelitis has occurred as a result of injections of vaccines, drugs, and other medicinal agents. There is evidence that injections for the prevention of diphtheria, whooping cough and possibly tetanus, when given during an epidemic of poliomyelitis, may, on rare occasions, localize the paralysis in the inoculated arm or leg. There is no satisfactory evidence that other types of injections have any effect on the localization, frequency or severity of poliomyelitic paralysis. In the small number of persons with localization of paralysis in the inoculated limb, the injections, for the most part, were given about 7 to 21 days prior to onset, which corresponds to the usual incubation period of poliomyelitis. This has

raised the question as to whether or not inoculated persons have a greater chance of contracting poliomyelitis during an epidemic.

There is as yet no final answer to this question, but it is a fact that, even if there should be an increased chance, it is extremely small. Many thousands of poliomyelitis cases occur every year among children who have not had any injections during the preceding few months, and thousands of children have received injections for whooping cough, diphtheria and tetanus during poliomyelitis epidemics and have not developed the disease.

Diphtheria, tetanus and whooping cough are serious diseases which can be prevented by immunization. Unchecked, these diseases present a far greater hazard than poliomyelitis. The benefits derived from immunization against these diseases far outweigh the questionably small increased chance of contracting poliomyelitis. However, even this questionable risk can be avoided by carrying out these immunizations when poliomyelitis is not epidemic in the community. There appears to be no good reason for withholding these immunizations during the summer months in communities that are not having an epidemic of poliomyelitis.

Furthermore, poliomyelitis is at all times so rare in infants under 6 months of age, and the danger from other infectious diseases, particularly whooping cough, is so great, that it is advisable to continue the immunization procedures for this age group even during a poliomyelitis epidemic. In adults also, poliomyelitis is relatively so infrequent that when there is a need for immunizing or therapeutic injections, such injections should not be withheld.

Certainly no parent should object and no physician should hesitate to administer a needed antibiotic, drug or other injection for treatment of disease at any time. When there is immediate danger from diphtheria, whooping cough or tetanus, the preventive inocu-

lations should be given to all threatened age groups even during a poliomyelitis epidemic. In the final analysis the decision as to when an immunizing or therapeutic injection shall be given to an individual patient must rest with the physician.

Letter to the Editor

FLUORIDATION OF WATER

A GREAT MANY ARTICLES dealing with fluoridation of communal water supplies have reached this office. In addition, a number of reports have been received giving in part the experience and observations in several centres which have undertaken to add fluorine to the water supply. The sum total of these observations is that a reduction has been brought about in dental caries. The dose of fluoride has been tentatively set at 1 p.p.m. of water.

We have been informed that the benefits to be obtained from the fluoridation of water are in the age group between three and twelve years. Beyond this age group it is indicated that nothing of benefit is to be expected from this measure. In a word, it appears that benefit is limited to the age of tooth formation and some years following.

Fluorine has a strong affinity for calcium, and undoubtedly it deposits, if taken internally, in the tissues in which calcium is a primary factor in development. Enthusiasm runs high with respect of the observations that have been made showing the influence of fluorine on early caries. Fluorine deposits in the enamel and other structures of the teeth, and renders them more resistant to the action of acid-forming bacteria. It is not claimed that bacterial action constitutes the one factor that brings about early caries. It is equally certain that there exists in some children a lack of calcium and in others an inability to utilize the calcium they take in the diet. We find that in spite of the calcium intake in the diet and the improvement in the metabolism of cal-

cium we hope to bring about by the administration of vitamin D, children still develop early caries which we attribute to the action of acid-forming bacteria on sugar remaining in the mouth and about the teeth, and as the result of faulty mouth hygiene.

In spite of all considerations, including the exercise of mouth hygiene, we still have dental caries. Here is where fluorine enters the picture. Beyond its ability to harden tooth structure against the influence of acid-forming bacteria in the mouth, no thought seems to have been given to what may be the reaction of the body to continued dosing with fluorine. Again, we are not by any means sure that non-resistance of enamel is the only cause for early caries. There are a number of other reasons that could well be conceived.

There is little information in the literature regarding toxic limits for fluorides. The State of Massachusetts uses a figure of 1 mgm. per cubic meter of air as a guide in the determination of a maximum allowable concentration in the State Code for Industrial Hygiene. Fluorine is a highly toxic substance and is known to be poisonous amongst industrial workers, in relatively insignificant amounts. An authoritative text states:

"Acute effects resulting from exposure to fluoride compounds are due to hydrogen fluoride. Chronic fluorine poisoning or fluorosis occurs in miners of cryolite, and consists of a sclerosis of the bones, caused by fixation of the calcium by the fluorine. There may also be some calcification of the ligaments.

The teeth are mottled, and there is osteosclerosis and osteomalacia. The bony and ligamentous changes are demonstrable of X-ray.

"Loss of weight, anoxia, anaemia, wasting and cachexia, and dental defects are among the common findings in chronic fluoride poisoning. There may be an eosinophilia, and impairment of growth in young persons."

The above quotation specifically points to the fact that mottling of teeth is an indication of chronic fluorine poisoning. We do not know the limit of fluorine dosage at which it might be considered safe to drink treated water continually. South of the City of Calgary there is an area in which fluorine occurs naturally in the water, and it is not an infrequent happening in our school dental clinic to observe marked mottling of the teeth of children who have come to the city from that area. In a situation such as this we can see the deleterious effect in the teeth. What we cannot see is the degree of harm that has been done to other bone structure.

The fluorides are cumulative in their action, and it must be determined what amount is needed to be taken by a child before the protective influence of the

fluorides is fully established. Once established, is it still necessary to take an unknown daily dose of this highly toxic halogen to maintain this purely regional protective efficiency? The unknown daily dose is mentioned by reason of the fact that none of us can say how many glasses of water a child drinks in any one day, in spite of being told how many he should drink. Furthermore, the drinking of water is pretty much seasonal, for it is inconceivable for as much cold water to be taken in the depth of winter as in the height of summer. We seem to be entertaining something of a hit-and-miss proposition regarding what could become a highly controversial subject.

Improvement in the caries problem is noted following one or two years of fluoridated water. The advantage is in the order of one-third to one-half as much caries. It would be interesting to know what might be the pathological picture in the individual following twenty or thirty years of forced consumption.

The advantages of topical application appear to be many.

—W. H. HILL, M.D., C.M., D.P.H.,
Medical Officer of Health,
Calgary, Alberta.

EMPLOYMENT SERVICE

Director and Medical Officer of Health for newly formed Thunder Bay Health Unit (Fort William and area). Diploma in Public Health required. Salary according to experience. Apply to Mr. D. M. Martin, City Clerk, City Hall, Fort William, Ontario.

Public Health Nurses: Simcoe County Health Unit requires public health nurses for generalized program. Salary \$2,300-\$2,800. Annual increment \$100. Sick-leave plan. Four weeks' vacation. Blue Cross available. Transportation allowance. Apply to Mr. J. R. Coleman, Secretary-Treasurer, Court House, Barrie, Ontario. 5/

Sanitary Inspectors required by Simcoe County Health Unit. Salary \$2,500-\$3,000. Annual increment \$100. Sick-leave plan. Four weeks' vacation. Blue Cross available. Transportation allowance. Apply to Mr. J. R. Coleman, Secretary-Treasurer, Court House, Barrie, Ontario.

Public Health Nurses: Applications are invited from qualified public health nurses. Generalized program. Minimum salary \$2,400 with annual increments according to experience. Liberal car allowance. Good personnel policies. Apply to Dr. R. S. Peat, Medical Officer of Health, Stormont, Dundas and Glengarry Health Unit, 104 Second Street West, Cornwall, Ontario.

Bilingual Public Health Nurses for generalized program in a county health unit. Half way between Ottawa and Montreal. Car provided or mileage allowance on privately owned car. Minimum salary \$2,400. Apply to the Medical Officer of Health, Prescott and Russell Health Unit, Hawkesbury, Ontario.

Medical Officer of Health: Applications are invited immediately for the position of Medical Officer of Health of the City of Peterborough, to direct a well-established health department. Excellent working conditions and employment benefits. Please give complete biographical record in applying to E. A. Outram, City Clerk, Peterborough, Ontario.

Medical Officer of Health: Applications are invited from graduates in medicine for the position of Medical Officer of Health to the Foothills Health Unit, based at High River, 38 miles south of Calgary. Possession of a Diploma in Public Health or equivalent will be an advantage. Salary in accordance with Provincial Government Salary Schedule. Superannuation and usual benefits. Apply to Secretary of Board of Health, Foothills Health Unit, High River, Alberta. State qualifications and experience.

CIVIL SERVICE (FEDERAL)

A MEDICAL OFFICER

\$6,600 - \$7,200

For the Department of National Health and Welfare
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Details and application forms at your nearest Civil Service Commission Office, National Employment Offices and Post Offices.

